The Cryptozoology Review

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Editorial

It has been a long time—too long—since the last issue of *The Cryptozoology Review* (*TCR*) was published. For this, I must apologize. The reason for the extreme lateness of this issue is mainly due to my university commitments. This past school year was my first year at the University of Guelph, where I am pursuing a Bachelor of Science (Honours) degree in marine biology. When I was in high school, I was able to balance my academic commitments and *TCR*, but I have found university is simply too much work to allow this. For this reason, I am not sure what the future publication schedule of *TCR* will be, but I admit that it will probably be irregular. We will, however, be trying very hard to put out another issue before the end of the summer, or, if not, in the fall.

Through all of this, I hope you find that *TCR* is of sufficient quality to make up for its tardiness! We put an enormous amount of effort into every issue, to assure that it is as excellent as possible. I hope you like this issue. Please let me know if you have any criticisms, comments, or suggestions.

As always, we appreciate receiving manuscripts, including articles and book reviews, for publication. There is no guarantee that we will publish your work, but we always like to look at new material. If you think you have good writing or artistic skills, and are interested in contributing, we would be happy to hear from you!

Lastly, I can assure you that despite the less than perfect publication schedule of *TCR*, you will not be shortchanged in any way—you will receive all of the issues that you paid for. I hope you will continue to support *TCR*: a cryptozoological magazine striving for first-rate scholarship and high quality. Thank you.

– Ben S. Roesch

About *The Cryptozoology Review*

The Cryptozoology Review is published 2-3 times a year by Ben S. Roesch. Subscriptions are (in Canadian currency) $16.00 in Canada, $18.00 (air mail) in the US (or $14.00 US funds), and $22.00 (air mail) in all other countries (or equivalent amount in British [£10.00] or American funds [$16.00]). Please write to the editor with regard to ordering back issues and sample copies. Method of payment: In the US, Canada, and the UK, you may pay by personal check, money order (International MO outside of Canada), or well-concealed cash (all in either Canadian funds or the equivalent in US or UK funds). In other countries, you may pay by well-concealed cash (in any currency), or by International Money Order (in US or Canadian funds only, please). If you pay in funds other than Canadian, American, or British, please make sure that you send the amount equivalent to the subscription rate. All checks and money orders should be made out to "Ben S. Roesch". If there are any problems with payment, contact the editor. Also, for those that run their own cryptozoological publications, keep in mind that we are willing to exchange subscriptions, as long as the relative prices are about equal. How you can help: If you are interested in contributing your cryptozoological artistic, writing and/or editing skills to TCR, please contact the editor. We take unsolicited manuscripts and artwork! Send the editor anything you think we might be interested in, and we will review it and get back to you. Please write your article professionally and fully-referenced. We are non-profit, so payment is in copies (2 for an article, 1 for a review). Legal stuff: Everything in TCR is copyrighted! Please do not reproduce anything without permission. We usually approve requests to reprint material, provided we know what it is used for, and it would save both of us a lot of trouble. Of course you may quote material in *TCR*, but please cite it properly. Thanks!

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On the cover:
Phyllomedusa bicolor. Painting (acrylic on canvas) by Jack Rabbit, © 1999.

On this page:
An illustration of a "wildman", from an 18th century manuscript published in Ulan Bator, Mongolia. Reproduced from Myra Shackley's 1983 book *Wildmen* (p. 97).

Letters

We welcome letters on any thoughts you may have about The Cryptozoology Review *or its contents. If you write us a letter, please tell us whether or not it is fine with you to publish it in the "Letters" section of upcoming issues. We reserve the right to edit letters for content and/or clarity.*

Solving a Lake Monster Myth

I would just like to share a funny local mystery I recently "solved".

About 20 minutes from my home in Minnesota is a small town called Crosby situated on Serpent Lake. The town's most memorable landmark is a huge, 30 ft (9 m) long, scaly serpent constructed in 1977. Despite my interest in aquatic cryptids, I have never really bothered to look into possible lake monster legends surrounding Serpent Lake, or how the name originated. So I decided to do some investigation.

The serpent statue, if only by coincidence, fits perfectly with the general serpentine descriptions of lake monsters. What impressed me were the little features that you wouldn't normally expect from designers assigned to create a mythical creature. For example, it had a pair of paddles on its breast, a swan-like neck, a row of descending ridges starting from behind its head like a mane, and, curiously, a split tail at the end. After I studied the statue for some time, I walked into the local City Hall and inquired on the origin of the name. The woman at the front desk answered: "It's called Serpent Lake because some years ago a man claimed he saw a serpent in it." Unfortunately, the woman couldn't offer further details. She then called the local library and after conversing with what sounded like a very knowledgeable librarian, it was revealed that the Indians had originally named it Serpent lake. Even better, I thought, since Indians give lakes names with significant meaning. I figured a lake monster legend was a possibility—perhaps a Minnesota version of Ogopogo?

However, 30 minutes later I phoned a local historian, who told me the "real" reason for the lake's name. The Indian name for the lake simply means "snake"; it was a white resort owner who decided the title "Serpent" was more romantic and had more business appeal. What's more, the Indians did not name the lake "Snake Lake" because of a large aquatic cryptid. Rather, the lake was considered a place of exile, where a tribe of Ojibwa expelled an adulterous husband. This man was deemed a "snake" for his behaviour, and the lake where he was forced to live in solitude became known as "Snake Lake".

So, the monster statue at Serpent Lake—which has spurred rumors of possible cryptids—is really a token of infidelity without anyone even knowing it!

Nick Sucik
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Erratum

Thanks to Richard Martin for pointing out that rat-fishes (chimaeras) were wrongfully referred to as elasmobranchs on p. 13 of the last issue. Elasmobranch is a name given to the subclass comprising sharks, skates, and rays; chimaeras belong to the related subclass Holocephali. It remains unexplainable how in earth such an error passed the eyes of the editor, a proud elasmobranch specialist!

A Compendium of Cryptids

("All the latest cryptozoology news fit to print")

by Ben S. Roesch
with contributions by John L. Moore

South African "Horse-Headed Snake"

In late April, 2000, reports of a large "yellow snake" were causing much concern to Ezitapile villagers in the Lukholweni administrative area in Maluti, Eastern Cape, South Africa. "People there live in fear and they are serious about this. They have even threatened to leave the area because they are so scared," said Captain Mpofana Skwatsha, of the Aliwal North police, who visited the area. The appearance of the yellow snake, as given by eyewitnesses, is certainly strange. "According to what I was told by almost everybody there, the body of the animal looks like a 20-litre drum, its head is similar to that of a horse and it is said to have a mane on its back with a long tail which is coiled around one of the trees in the nearby indigenous forest," Skwatsha said. Apparently, the stories of the snake spread throughout the district, and Skwatsha later arrived to investigate the claims after people approached him for help.

When Skwatsha arrived, he took four elderly villagers on a search of the place where the creature was spotted, but nothing turned up. They convinced Skwatsha that the animal was there, but could not be found because it was probably hiding in the forest. Villagers told Skwatsha that he could only hope to sight the snake if he took hunting dogs along with him (as far as I know, he did not test this idea).

Although no reports of attacks upon livestock or humans had been recorded, villagers were afraid to go near to the area where the creature had been sighted. "Even the elderly people I interviewed, who are so positive about this, said they had not seen such a thing in their lives before and are all concerned about their safety in the village," Skwatsha said. According to a Daily Dispatch news article, the snake is "widely believed to be there because even their livestock became agitated when in the area." The villagers have even appealed to the South African government to send a helicopter to hunt the snake before it starts to cause trouble.

What is one to make of all of this? First, I should say that the original report from the *Daily Dispatch* provides few details as to the area where the creature was sighted, who saw the creature, and other important information. From what I have read, I am not terribly convinced by the stories. They seem to be just that—stories of a mythical or misidentified creature propagated by superstition. The description is rather fanciful, and the hysterical outcome, despite the fact that few people actually saw the creature, is not convincing. Jack Rabbit (post to the cz Internet mailing list April 27, 2000) has suggested that the strange snake may have been caused by the misidentification of a molting python, or some other large snake. The molt (dry skin) often collects at the head and on the back, features that might lead to the description of a horse-like head and a mane. Others, such as Gavin Joth (post to the cz Internet mailing list April 27, 2000), have argued that it is unlikely that villagers could mistake a python—an animal with which they are presumably familiar—for a strange monster. I find it difficult to settle on either side of the story, because the details given are not very specific. However, it should be kept in mind that humans are fallible eyewitnesses and often tend to exaggerate sightings, which they may not have even been privy to, into hyperbolic stories.

Source: Titi, M. 2000. Villagers fear 'strange creature'. *Daily Dispatch* (http://www.dispatch.co.za/2000/04/25/easterncape/AREA.HTM), April 25.

Sea-Serpent Appears off Cape Bonavista, Newfoundland

Sea-serpent sightings seem to be less publicized these days. In the 19th century, and even for much of the 20th century, sea-serpent sightings were big news for the press. Now, they are less commonly reported. Perhaps sea-serpent legends are less prevalent among fishermen and others in this day of high technology; sightings of unidentifiable animals are not construed in that light and are thus less publicized. Whatever the case, new sea-serpent reports are always a fascinating

topic for discussion.

The latest comes from Newfoundland, Canada, a region with a great tradition of sea-serpent sightings. Bob Crewe was driving in his truck along Cape Bonavista (which overlooks Bonavista Bay) one morning in early April, 2000, when he spotted a strange object out on the water. He stopped his truck on a cliff overlooking the ocean to get out for a better look. "I saw its body in the water measuring about 30 feet [9 m] across, just lying there and moving slightly," said Crewe. "It looked something like a rock in the water, but I knew there was no rock there. I blew the horn and it stuck its head out of the water. It had a long neck about four or five feet [1.2 or 1.5 m]." His impression of the creature, which was somewhat obscured by ripples in the water, was that it "looked somewhat like a huge snake which had some kind of 'snout' on its head." Crewe added: "I wish I had a camera aboard. It took off towards the lighthouse (at the tip of the cape) with its head still out of the water, tilted slightly forward. It seemed like it was using its body to push itself along and it was going very fast."

The last publicized sea-serpent report from Newfoundland occurred in 1997, when Charles Bungay saw a horse-headed, scaly-skinned creature with dark, stereoscopically-oriented eyes and two ears or horns on its head (see *The Cryptozoology Review* vol. 2 no. 1). Jon Lien, a cetacean specialist from Memorial University, was sufficiently impressed by Bungay's report that he contacted Paul LeBlond, a University of British Columbia oceanographer with an interest in cryptozoology. Philip Hiscock, an archivist in the folklore department at Memorial, was more skeptical of the sighting, thinking it was a misidentification of a giant squid (*Architeuthis dux*). To me, if we accept Bungay's details at face value, the giant squid identification just does not fit.

On the other hand, Crewe's sighting is more easily explainable as a giant squid. (However, because there are not many details regarding the sighting, any explanation of what Crewe saw remains speculative.) The neck that stuck out of the water could have been a tentacle, and the "snout" the suckered club at the end of the tentacle. The giant squid has been used many times in the past to explain sea-serpent sightings. The only problem with this explanation is that it sometimes calls for unusual behaviour on the squid's part. For example, it seems unusual that a giant squid would lay at the surface, stick a tentacle out of the water, and then move off with the tentacle still aloft. This would be required behaviour in Crewe's sighting, for example. However, as Richard Ellis (1994) has argued, we know so little about the giant squid that we cannot reliably say that it does not do this. Certainly, Occam's razor would favour the giant squid explanation, because a giant squid with unusual behaviour is still a more mundane interpretation than a bona fide sea-serpent. In the case of Crewe's sighting, though, there is not enough information for me to settle on either side of the argument, though I suggest the giant squid identity as the most likely explanation.

Still, Crewe is adamant that what he saw was not a giant squid. "It wasn't a giant squid. I know that for sure," he said. "I wasn't close enough to see scaly skin or eyes or any detail like that. All I know is that was a strange creature, and it's a big ocean that could contain a lot of strange things we've never seen." I might add, perhaps facetiously, that the giant squid is very strange! What's more, even if Crewe only saw a giant squid, he was still privy to an amazing sight since few people have ever seen one alive.

Sources: Ellis, Richard. 1994. *Monsters of the Sea*. New York: Alfred A. Knopf. // Whiffen, Glen. 2000. Sea monster sighted off Bonavista. *The Telegram* (St. John's, Newfoundland, Canada), April 6.

A Monster in Lake Burley Griffin, Australia

According to the Australian cryptozoologist Tim the Yowie Man (yes, that is his legal name), there may be a large monster in Lake Burley Griffin, near Canberra. In a press release that appeared in late April, 2000, Mr. Yowie Man reports that two men—Nigel Lambert, a 34-year-old carpenter from Canberra, and Mark Dalton, a friend visiting from England—were walking along the lakeshore at about 11:30 am when they heard a "phew" noise coming from the water. "We turned around and looked out towards the middle and saw what looked like a wake ... about 70 metres [230 ft] offshore," Lambert recalled. "It came from nowhere. The wake would have been about 10 m [33 ft] wide and 0.5 m [1.5 ft] high. I wondered what the hell could cause such a swell." Lambert added that he frequently fishes at the lake, and that it is home to "some pretty big carp". "But there is no way a carp could create a wake like that," he said. The men said the lake was flat at the time, and there were no boats around. "Upon seeing it, I turned to my mate Nigel ... nothing usually fazes him, but he looked totally freaked out," Dalton said. "It's changed my life. Never have I seen something that is so unexplainable," Lambert said.

Tim the Yowie Man interviewed the two and "believes their story", saying "they seemed to me to be pretty genuine."

Showing more skepticism, he added "I'd be stoked if it was a monster, but the chances of that are fairly remote. But the question remains: what in the hell was it?" Mr. Yowie Man said he even talked to marine biologists at the Australian National University about an expedition, but as of yet I have not heard of any action to this regard. I do not necessarily doubt that Lambert and Dalton saw something strange, but it is hardly indicative of a monster.

Sources: Holder, P., & Casamento, J. 2000. Burley up and catch a monster. *Daily Telegraph* (Australia), April 26. // Irving, M, & Hewitt, S. 2000. Yowie-ee! Pair spot a serpent. *West Australian*, April 25.

A Predicted Rodent from Fernando de Noronha

Fernando de Noronha is a small volcanic island off the northeastern coast of Brazil. The native vertebrate fauna of the island is quite meager: there are two reptiles and four land birds (one of which is extinct), as well as sea birds. No native mammals were known from the island, although both rats and mice (*Rattus rattus* and *Mus musculus*, respectively) have been introduced. However, one of the earliest known descriptions of Fernando de Noronha, in a book attributed to Amerigo Vespucci, lists "very big rats" as among the animals found on the island. Unfortunately, this book is of very dubious origin—it is both factually and stylistically inconsistent with Vespucci's known writings, and is a sensationalized account intended for commercial success. Nevertheless, the author seems to have had access to reports of Fernando de Noronha which are otherwise unknown, as the physical and biological descriptions of the island are accurate. It seems unlikely that the "rats" referred to are the introduced rodents, because the book was published within a couple of years of the first European visit to the islands, and consequently the introduced rodents' population would not have been large enough to be noteworthy (and they would have been familiar animals in any case). Consequently, in 1890, H.N. Ridley, who had studied the biota of the island, speculated "Is it not probable that there was formerly an indigenous rat like mammal, exterminated by the introduction of the black rat?" Unfortunately, Ridley could not find any evidence that such an animal still existed, but suggested that it might be possible to find its remains.

In 1973, ornithologist Storrs L. Olson explored Fernando de Noronha for fossils, in the hope of finding skeletal material from this hypothetical mammal or from extinct birds. His efforts were rewarded: he discovered the remains of a new genus and species of murid rodent, which has now been named *Noronhomys vespuccii* by Michael D. Carleton and Olson. As the name suggests, they argue that this discovery validates the account attributed to Vespucci (although, given the doubts surrounding the old description, one might be tempted to play the devil's advocate and argue that this is simply a coincidence). The closest relative of the new rodent appears to be the South American genus *Holochilus*, commonly known as marsh rats, although it seems to have led a more terrestrial life than its mainland relative. *Noronhomys* was probably similar in size to the living *H. sciureus*, which weighs 200 to 250 grams (0.4 to 0.6 lb) on average. Carleton and Olson suggest that it became extinct because of predation by, competition with, and diseases from introduced animals (probably rats and cats).

Sources: Carleton, M.D., & Olson, S.L. 1999. Amerigo Vespucci and the Rat of Fernando de Noronha: A New Genus and Species of Rodentia (Muridae: Sigmodontinae) from a Volcanic Island Off Brazil's Continental Shelf. *American Museum Novitates* 3256. // Olson, S.L. 1981. Natural History of Vertebrates on the Brazilian Islands of the Mid South Atlantic. *National Geographic Society Research Reports* 13: 481-492. // Ridley, H.N. 1890. Notes on the Botany of Fernando Noronha. *Journal of the Linnean Society, Botany* 27: 1-95.

Rediscovery of Roosevelt's Muntjac

Since late 1994, there have been rumors of a third species of muntjac (or barking deer) in Laos, in addition to the common muntjac (*Muntiacus muntjak*) and the giant muntjac (*M.* [or *Megamuntiacus*] *vuquangensis*). A specimen of this animal was found in January 1995 in a private menagerie in Lak Sao, a town in the Khammouane Province of Laos, by a team including George B. Schaller, William Leacock, Khamkhoun Khounboline, Robert J. Timmins, and William G. Robichaud. Several skulls and partial skulls of this third Laotian muntjac have also been obtained. It is smaller than the other two species, is almost black in color, and has short antlers.

A recent genetic analysis led by George Amato shows that this muntjac is not a new species; it was already described in 1932 as *Muntiacus rooseveltorum* (Roosevelt's muntjac). As *M. rooseveltorum* had previously been known from only a single specimen (a subadult male collected in 1929 at Muong Yo in Laos), it was often treated as a synonym of some other species (either *M. reevesi* or *M. feae*).

Sources: Amato, G., Egan, M.G., Schaller, G.B., Baker, R.H., Rosenbaum, H.C., Robichaud, W.G., & DeSalle, R. 1999. Rediscovery of Roosevelt's Barking Deer (*Muntiacus rooseveltorum*). *Journal of Mammalogy* 80: 639-643. // Osgood, W.H. 1932. Mammals of the Kelley-Roosevelts and Delacour Asiatic Expeditions. *Field Museum of Natural History, Publication* 312, *Zoological Series* 18: 191-339. // Schaller, G.B. 1995. An Unfamiliar "Bark." *Wildlife Conservation* May/June. // Timmins, R.J., Evans, T.D., Khounboline, K., & Sisomphone, C. 1998. Status and Conservation of the Giant Muntjac *Megamuntiacus vuquangensis*, and Notes on Other Muntjac Species in Laos. *Oryx* 32: 59-67.

A New Rabbit from the Annamites

The discovery of a new species of rabbit in the Annamite mountains (which run along the border between Vietnam and Laos) was recently announced by Alison K. Surridge, Robert J. Timmins, Godfrey M. Hewitt, and Diana J. Bell. The new rabbit was discovered in 1995 by Timmins, who found freshly captured specimens for sale in a market in Ban Lak, Laos. It has since been found in Vietnam as well.

Fig. 1. Photograph of the new *Nesolagus* sp. from the Annamites. Courtesy: Wildlife Conservation Society.

The newly discovered rabbits are described as having "black or brown dorsal stripes, ferruginous rumps and short tails and ears." They are very similar to *Nesolagus netscheri*, which is found only in Sumatra. While genetic analysis shows that the two populations are distinct enough to be considered separate species, they are more closely related to each other than to other rabbits. The Annamite rabbits have consequently been assigned to the genus *Nesolagus* (although they have not yet received a specific name). Surridge et al. hypothesize that the ancestors of the two species were separated during the Pliocene by changes in sea level and the amount of forest cover in the region.

Source: Anon. 1999. Bizarre Striped Rabbit Discovered in Asia. http://www.wcs.org/news/breakingnews/international/990818.rabbit.html // Surridge, A.K., Timmins, R.J., Hewitt, G. M., & Bell, D.J. 1999. Striped Rabbits in Southeast Asia. *Nature* 400: 726.

A New Muntjac from Myanmar

With all the new mammals that have recently been discovered in Vietnam and Laos, it's easy to forget that other parts of southeast Asia have not been thoroughly explored biologically, and thus may be home to undiscovered species. North Myanmar is a mountainous area near the Chinese border that has only rarely been visited by zoologists. Surveys of the region in 1996 and 1997 indicated that three species of muntjac (or barking deer) are native to the region: the common muntjac (*Muntiacus muntjak*), the black muntjac (*Muntiacus crinifrons*, previously known only from China), and a heretofore unknown species. The latter deer has now been named *Muntiacus putaoensis* (after Putao, the closest town) by George Amato, Mary G. Egan, and Alan Rabinowitz. The people who live in the area refer to the new species as the "leaf deer," as the carcass of one of these animals can be wrapped up in a single leaf of the plant *Phrynium capitatum* (of the family Marantaceae).

The new muntjac is the smallest known species of deer—it weighs 11.9 kg (26.3 lb) and has a shoulder height of 45.5 cm (1.5 ft). Both sexes are similar in size, and both have long canine teeth, a feature usually only found in male muntjacs. Such teeth are also found in both sexes of the Truongson muntjac (*Muntiacus truongsonensis*), a species found in Vietnam and only named in 1998. Genetic analyses suggest that the closest relative of *M. putaoensis* is indeed *M. truongsonensis*, followed by *M. rooseveltorum* (Roosevelt's muntjac) and *M. vuquangensis* (the giant muntjac).

So far, *Muntiacus putaoensis* is known only from northern Myanmar, although reports of small muntjacs from the adjacent area of China may be of this species. While it is said to be fairly common, native hunters report that it has gotten rarer in recent years.

Sources: Amato, G., Egan, M.G., & Rabinowitz, A. 1999. A New Species of Muntjac, *Muntiacus putaoensis* (Artiodactyla: Cervidae) from Northern Myanmar. *Animal Conservation* 2: 1-7. // Rabinowitz, A., & Khaing, S.T. 1998. Status of Selected Mammal Species in North Myanmar. *Oryx* 32: 201-208. // Rabinowitz, A., Myint, T., Khaing, S.T., & Rabinowitz, S. 1999. Description of the Leaf Deer (*Muntiacus putaoensis*), a New Species of Muntjac from Northern Myanmar. *Journal of Zoology* 249: 427-435.

Other Cryptozoology News

• Two separate groups of hunters in the Kirov Region of northern Russia reported two sightings of "yetis" in August 1999. The first sighting took place from a car, as the hunters were driving from the village Zonikha to the Suvod river in Verkhnoshizhemskiy district. "A hairy man-like animal with narrow shoulders and long arms was chasing wild boar. One could not take it for a bear", the hunters said. The second sighting occurred near the village Mokrusha in Sovetskiy district. In order to see the "yeti" better, one of the hunters climbed a tree and said "the hairy stranger held itself upright, with its arms hanging below the knees". The hunters said the creature's footprints were different from those of a bear. Apparently, the Kirov regional department of environmental protection has shown interest in the sightings, asking locals who have seen similar man-like animals to submit details. The preceding details came from a short report from the Russian news agency RIA. It is not known how the term "yeti" came into the report—whether from the eyewitnesses, the RIA, or during the English translation of the report (distributed by the BBC). The name "yeti" is often used by the media in the same capacity as "bigfoot"—to describe any large mystery primates, regardless of their geographical locality. Of course, stories of the yeti proper come from the Himalayan mountains region, not from northern Russia.

Source: Anon. 1999. Russian hunters say they spot yeti—twice. *BBC Monitoring Newsfile*, August 26.

• According to Australian cryptozoologist Tim the Yowie Man, a 50 ft (15 m) sea-serpent was spotted seven times off Western Australia from May to July 1999. Apparently, in one encounter the gigantic eel-like creature came within 6 ft (2 m) of a fishing vessel off Carnarvon, and one eyewitness said it nearly caused the boat to capsize. "We've nicknamed it Ossie," Yowie Man said. "It's a tribute to Nessie. But the resemblance ends there. Nessie is strictly a freshwater creature. Ossie is longer and skinnier, lives in salt water and has square dorsal fins instead of a rounded hump." Without further details and proper documentation, I find it hard to comment upon these sightings.

Source: Anon. 1999. Nessie's Aussie Cousin. *Scottish Sunday Mail*, July 4.

• In April, 2000, meetings of the Convention on International Trade in Endangered Species (CITES) accorded protection to one of cryptozoology's favourite animals, the coelacanth. The "living fossil" was put into Appendix I of the convention, which bans any trade in the species. The 11 day meeting, with delegates from 150 countries in attendance, also upheld bans on ivory trade and protection for whales and sea turtles. However, the meeting was not all good news, with a refusal to protect great white sharks, whale sharks, and basking sharks, or to ban trade of musk deer parts and bottlenose dolphins.

Source: Anon. 2000. Trade in "Living Fossil" Fish Banned. *Xinhua News Agency Bulletin*, April 19.

• The Indonesian population of coelacanths, attributed to a new species, *Latimeria menadoensis*, has until recently been known from only two specimens, both caught by fishermen off the island of Manado Tua, north Sulawesi. Recently, a team of scientists led by Hans Fricke (well known for his observations of Cormoran coelacanths [*L. chalumnae*]) attempted to find other coelacanths in the area around Sulawesi using the submersible *JAGO*. While they were unable to find any around Manado Tua, they did find two at a site 360 km (220 miles) to the southwest at a depth of 155 m (510 ft). The habitat in which the Indonesian coelacanths were found may be unsuitable for *L. chalumnae*: the strong currents seem inappropriate for a sluggish drift hunter. In addition, the area around Sulawesi lacks the caves in which Cormoran coelacanths spend the day.

Source: Fricke, H., Hissmann, K., Schauer, J., Erdmann, M., Moosa, M.K., & Plante, R. 2000. Biogeography of the Indonesian Coelacanths. *Nature* 403: 38.

• Ogopogo is a lake monster reportedly living in Lake Okanagan in southern British Columbia. Many sightings have been reported and unsuccessful expeditions have been mounted. Now, several local businessmen have come together to offer a $2 million (Canadian) reward for conclusive scientific proof for the creature's existence. Just in case, they have taken out an insurance policy in the event Ogopogo is found. In Penticton, a town on the lake, the chamber of commerce hopes that the reward will also boost tourism. According to John Singleton, of the chamber of commerce, "the reward's winner

will have to meet specific scientific criteria to prove what they have found is Ogopogo and not just an unusually large sturgeon or other fish that lives in the lake". What I find funny about this statement is that many lake monster sightings are probably the result of giant sturgeon and other fishes. Singleton said he had received many phone calls from people concerned that the reward will incite hunters to descend upon the lake with an intent to kill Ogopogo. However, Singleton says "you don't have to capture it. We're not going to put him in a zoo."

Source: Anon. 2000. Canadian lake monster now has a price on his head. *Reuters*, May 1.

• This fall, an expedition led by Jean-Michel Cousteau, the 61-year-old son of the late Jacques Cousteau, will set out to New Zealand in search of the giant squid (*Architeuthis* spp.). Cousteau plans to leave Port Moresby, New Guinea, on October 1, 2000 armed with a pair of new, million-dollar "Deep Rover" submersibles. The subs are slender, fast, and maneuverable craft that can carry two people, lying on their stomachs and peering out the front plexi-glass bubble. The team plans to use them to follow sperm whales (*Physeter macrocephalus*) down to the depths at which the whales feed on giant squid (about 600 m [2000 ft]), turn off the lights and engine, extend bait, and wait and hope for a giant squid to appear. The search will be concentrated at Kaikoura Canyon, a hot spot for sperm whales and giant squid. Recently, a number of *Architeuthis* specimens have been trawled up in fishermen's nets at the Canyon. Expeditions from the Smithsonian Institution and the National Geographic Society have attempted in the last couple of years to secure footage of the giant squid, which has never been seen alive in its natural habitat, but were unsuccessful. Although I wish the Cousteau team the best of luck, their approach seems to be too dramatic—at least as reported by the media—and is not always scientifically accurate. They speak of 75 ft (23 m) long giant squid, when the largest reliable measurements are about 50 ft (15 m) (and the recent New Zealand squids have been much smaller); they say the giant squid can change colour, when it apparently cannot to any appreciable amount; and they stress how dangerous and rapacious the giant squid is, though it is widely thought to be a rather passive ambush predator. What's more, on the way to New Zealand the expedition plans to make a stop at New Caledonia, to search for no less than the giant extinct shark *Carcharocles megalodon* (more traditionally known as *Carcharodon megalodon*). A spokesman for the expedition spoke of unfossilized *megalodon* teeth found on the ocean bed, a widely-circulated but incorrect myth. The spokesman also used the coelacanth and megamouth as justifications for their search for *megalodon*. My opinion is that they should not be wasting their time and money on such a goal, because there is little evidence that *megalodon* still exists (see Roesch 1998). Go get that giant squid instead!

Source: Jackman, C. 2000. Marine explorer's deep ocean odyssey... *Advertiser* (Adelaide, Australia), April 29. // Rhodes, T. 2000. Cousteau's son hunts monster of the deep. *The Sunday Times*, April 24. // Roesch, B. S. 1998. A Critical Evaluation of the Supposed Contemporary Existence of *Carcharodon megalodon*. *The Cryptozoology Review* 3 (2): 14-24.

• On New Year's Day 2000, villagers of the small and remote Malaysian town Kampung Chennah (with only 30 households), were discussing a reported sighting of mawas, a local bigfoot-like creature. Villager Liong Chong Shen, 50, claimed that he saw a couple of mawas at his rubber smallholding and durian orchard about a week earlier. "Wild boars had been attacking my durian saplings in the orchard, located about 11 km [6.8 miles] from Kampung Chennah. I went there to chase them away," he said. Liong was working in his orchard around noon when he saw the animals. As he was working, he became aware of a strong animal scent. "I then heard a grunt near the young rubber trees. My heart started pounding fast when I saw two mawas standing near the rubber trees as I feared they would attack me," he said. "I was about 10 m [33 ft] away from the two *mawas* and I had a clear view of them." Liong added that one of the mawas was about 1.8 m (6 ft) tall with long, shiny black hair covering its body, including the face. The other was about 1.5 m (5 ft) tall and was covered in long, brownish hair. The two mawas stared at Liong and then walked off into the jungle. If this report is valid, it represents another case in which a sighting of two mystery primates, presumably of the same species, reports two different hair colourings. Speculatively, this could be due to sexual dimorphism (the smaller mawa may have been a female), or hair colour differences between juveniles and adults (the smaller mawa could have been a juvenile).

Source: Lian, Hah Foong. 2000. Village abuzz over sighting of 'mawas'. Star Publications (Malaysia), January 2.

• A strange dinosaur-like reptile was allegedly spied by villagers in the Lake Murray area of New Guinea on two separate occasions on December 11 and 12, 1999. Boboa station councilor Sangame Sangame said that in the first sighting, villagers travelling in a canoe saw the animal wading in the shallow water near the Boboa. The second sighting was made nearby by a Seventh Day Adventist pastor and church elder. Following Sangame's description, *The Independent* wrote: "the animal has a body as long as a dump truck and nearly two metres wide. It has a long slender tail and a long neck. The head is shaped like a cow's, has large eyes [and] sharp teeth as long as fingers. The reptile walks on two hind legs which are as thick as a coconut palm tree trunk. It has two smaller forelegs. The skin is similar to a crocodile's and has largish triangular scoops on the back." Sangame reported the sightings to the Lake Murray police, but I know of no follow-up investigations.

The Independent also reported that "many people from the savannah grasslands of the South Fly district claim that they have seen large lizards similar to the Komodo dragons [*Varanus komodoensis*] of Indonesia. There have also been reports of large lizards up to 1.7 metres [6 ft] living in tree tops." Needless to say, I am skeptical of living non-avian dinosaur reports. I also find it strange that the reported "dinosaur" sounds precisely like a native's description of a theropod or hadrosaur illustration from a picture book. The stories of large monitor lizards are more believable. There are known species of monitors in New Guinea that can attain a length of 1.7 m. When *The Independent* wrote "large lizards similar to the Komodo dragons", I assume that they meant similar in size, as all varanids are similar in appearance. I would not totally rule out the possibility that monitors matching the dimensions of the Komodo dragon (up to 3 m [10 ft] long) may exist in New Guinea.

Source: Anon. 1999. Dinosaur-like reptile sighted at Lake Murray. *The Independent*, December 30.

• Sightings of big cats in the United Kingdom are becoming almost common-place these days, to the point where few people can seriously discount the idea that big cats—mainly escaped pumas (*Felis concolor*) and possibly leopards (*Panthera pardus*)—haunt the British Isles. At a recent Beast of Bodmin conference, with an attendance of nearly 100, a show of hands displayed that the majority in attendance believe that British big cats do indeed exist. The conference was organized as part of National Science Week in the U.K. and held at Plymouth College of Further Education's Goschen Centre, Devonport. A panel of academics, zoo keepers, police, and forteans discussed the matter in a largely positive manner. Panel member Seargent Bob Jasper, Devon and Cornwall Police's wildlife officer, said: "The police have got to accept there are big cats. We have had numerous sightings." However, Jasper stressed that the police response to a big cat sighting in Wrangaton in 1998, when armed officers with dogs were called in, would not be repeated. He thinks that the cats should be left alone, and even protected with new legislation (I am not sure how well this will go over with farmers who have lost livestock to alleged big cats). Ellis Daw, of Dartmoor Wildlife Park, Sparkwell, said there had been "positive sighting of brown pumas" at Sparkwell, as well as alleged sightings at Tamerton Foliot and Roborough. Both he and the Centre for Fortean Zoology's (Exeter) Jonathan Downes reported face-to-face sightings of puma-like animals. Chris Moiser, the College of Further Education's biology lecturer, said: "We have sightings of large exotic cats in Devon and Cornwall since the mid 1960s. Leave them alone. If you're lucky enough to see one, stand back and enjoy." Some other experts criticized alleged photographs of the U.K. big cats. College of Further Education's photography lecturer Paul Crowther uncovered most of the photographs he has as fakes, saying: "A lot of people say they have seen it and all I am saying is: 'Prove it'. The problem with looking at images is a lot of people see what they want to see." Although I agree with Crowther's comments—certainly they have much relevance to many cryptozoological claims—I still find myself rather convinced of the presence of big cats in the U.K. Many sightings and photos are undoubtedly fakes or misidentifications, but there remain rather credible encounters, and the entire idea is not really all that hard to believe.

Source: Telford, W. 2000. Don't be beastly to those big cats. *Evening Herald* (Plymouth, U.K.), March 27.

• In 1888, the research vessel *Albatross* trawled up a large (about 5 ft [1.5 m]), apparently unknown species of fish off Chile. A photograph of the fish appears in Ricciuti (1973), with a note claiming that it has never been identified. Recent research by Richard "Sherlock Fish" Ellis, however, has conclusively identified the fish as the Patagonian tooth fish (*Dissostichus eleginoides*) (see Gill & Townsend 1901, Townsend 1936, and DeWitt 1962).

Sources: DeWitt, Hugh H. 1962. On the Probable Identity of *Macrias amissus*, a Deep-Water Notothenioid Fish from the Chilean Coast. *Copeia* 1962: 657-59. // Ellis, Richard. 1998. Pers. comm. April 28. // Gill, Theo., & Townsend, C.H. 1901. The Largest Deep-Sea Fish. *Science* n.s. 14: 937-38. // Ricciuti, Edward. 1973. *Killers of the Seas*. (New York: Walker and Company), p. 285. // Townsend, C.H. 1936. The Largest Deep-Sea Fish: A Long-Missing Photograph of the Monster Comes to Light After Nearly Half a Century. *Bulletin of the New York Zoological Society* 39: 29-30.

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Native and Western Eyewitness Testimony in Cryptozoology

by Jack Rabbit

On an internet-based cryptozoology forum, this question was recently posed: *How should we evaluate the validity of eyewitness accounts from native peoples?* I shall attempt to answer that question. The issue of native eyewitness testimony is of considerable importance to cryptozoologists, as such accounts are a major component of the body of evidence for many purportedly undiscovered animal species. Native testimony typically receives either of two opposite and inappropriate treatments in cryptozoological literature (depending on the author's agenda): wholesale dismissal, or wholesale acceptance.

In this article, I'll present examples that illustrate why neither wholesale dismissal nor wholesale acceptance of native testimony is reasonable. Then I'll discuss the factors that are known to affect the validity of eyewitness testimony in general (gleaned from the substantial body of published research on the topic), with comments on how those factors may bear on native eyewitnesses. Finally, I'll offer my own thoughts on a few factors not discussed in the previously published literature—factors that may apply mainly (or exclusively) to native eyewitnesses, born to cultures and environments different from our own.

The Invalidity of Wholesale Dismissal of Native Testimony

Historically, Westerners have viewed native peoples as inferior—at best, like naive children; at worst, like base animals. Scientists have, regrettably, often reinforced this popular misconception (Durant & Durant, 1968; Gould, 1981). Natives' "folk tales" were regarded as prattle, without scientific significance of any sort—as products of "the overheated imagination of natives, which is sometimes influenced by alcohol or the love of rousing sensation" (Kittenberger, 1989). Consequently, the considerable wisdom (including, but by no means limited to, knowledge about local animals and plants) accumulated by various non-Western societies was largely ignored.

In recent years, Western researchers have come to realize the error of their earlier thinking with regard to native peoples. Scientific studies have shown certain outlandish-sounding claims by native observers to be true, or at least to have a basis in fact. Two interesting examples: the Matses Indians' tales of a frog that produces a "magic potion" that can be used to enhance hunting prowess; and the assertions by New Guinean tribesmen that certain local birds are poisonous.

Fig. 1. *Phyllomedusa bicolor*. Painting (acrylic on canvas) by Jack Rabbit, © 1999.

The Matses Indians claim that *sapo* (a sticky substance excreted from the skin of the tree frog *Phyllomedusa bicolor* [Fig. 1]) lends a hunter superhuman endurance and renders him invisible to game animals. Western biochemists have assayed the frog's skin secretions, and found that they contain chemicals that suppress pain, thirst and hunger. A hunter under the influence of *sapo* may be able to withstand physical hardships that would otherwise distract him from his game-tracking. *Sapo* also contains powerful emetics, diuretics, and laxatives. Researchers speculate that these agents flush the hunter's body of odorous compounds, thereby making him "invisible" (in an olfactory, not optical, manner) to his quarry (Erspramer et al., 1993).

The New Guineans' claim that the "rubbish bird" (*Pitohui dichrous*) is poisonous seemed highly unlikely when it was first recorded in the 1977 book *The Birds of My Kalam Country*, a compilation of the New Guinea highlanders' folklore (Dumbacher et al., 1992). Western scientists had been acquainted with

these common birds for over a century, and had not discovered any evidence of chemical defense (Diamond, 1992). Further, of the approximately 9000 known species of bird, not one was known to produce a poison or venom of any sort (Diamond, 1992). However, in 1990, Western ornithologists independently (and accidentally) discovered that handling live *Pitohui dichrous* caused "numbness, burning, and sneezing" (Dumbacher et al., 1992). Subsequent analysis of *Pitohui* tissues revealed the presence of homobatrachotoxin, the same poisonous compound secreted by a genus of poison-dart frogs (*Phyllobates*) from Central and South America. In the concluding paragraph of his *Pitohui* commentary in *Nature* (1992), Jared M. Diamond asks:

> What other treasures of biological knowledge are becoming lost with the rapid acculturation of the world's few remaining Stone Age hunters?

The Invalidity of Wholesale Acceptance of Native Testimony

In the light of the aforementioned findings, and many others like them, we can see that our previous arrogant dismissal of native wisdom was unwarranted. In our recent reassessment of indigenous cultures, however, we now tend to go too far the other way. A substantial body of recent popular literature portrays all natives as sages—infinitely wise about their environments, infallible in matters regarding local flora and fauna (see for example such magazines as *Pangaia* and *Green Egg*, and Marlo Morgan's controversial novel *Mutant Message Down Under*). This new attitude, while perhaps less offensive than the old one, is equally absurd. The following examples—the Somali *apris* and the Indian *bis-cobra*—illustrate that while natives may exhibit considerable knowledge about the animals among which they live, that knowledge is sometimes faulty.

Spawls (1973) tells us that the Somalis fear the *apris*, a snake so venomous that its mere touch causes death within seconds. Spawls himself has positively identified a specimen of the snake—before an audience of terrified Somali witnesses—as *Eryx colubrinus*, a nonvenomous and inoffensive sand boa.

Minton and Minton (1969) report that natives of northern India tell chilling stories of the *bis-cobra*, whose name indicates it has the killing power of twenty cobras. The culprit turns out to be the harmless gecko *Eublepharis hardwickii*. In Pakistan, natives call the related gecko *Eublepharis macularius* (Fig. 2) the *hun-khun*, and hold it to be "the deadliest creature... more dangerous than the Cobra." Similar superstitions surround likewise innocuous geckoes in various regions all over the world, including Egypt, Java, Mexico, and Argentina (Minton & Minton, 1969; Goodman & Hobbs, 1994; pers. obs.).

Fig. 2. Head of the gecko *Eublepharis macularius*. Drawing (pencil on paper) by Jack Rabbit, © 1995.

Both errors in evaluation of native accounts—wholesale dismissal, and wholesale acceptance—stem from the same flaw in thinking: the belief that native peoples are fundamentally different from Westerners. Although they live in different environments, and have different beliefs, they are not beings wholly unlike us. Like us, they have the capacity for wisdom and logic; like us, they have the capacity for folly and superstition. In spite of cultural differences, New Yorkers and New Guineans share the same sensory apparatus and the same sort of brain with which to process sensory input. It follows, therefore, that all of us share the same limitations in our ability to perceive, to interpret, and to recall objects and events. In considering how to evaluate native eyewitness accounts of "cryptid" animals, then, I propose that we should look at how experts evaluate Western eyewitness testimony, and note those factors in which a witness's cultural background may play a significant role.

Authors of cryptozoological literature often adopt an indignant and contemptuous tone when they discuss attempts to explain eyewitness testimony in terms of ordinary phenomena. In such an attempt, the cryptozoologists claim, is the implicit assertion that the witnesses are lying, or insane, or merely stupid. I hope that after you've read through the

following findings on eyewitness reliability, you'll realize that a witness can represent a falsehood as truth *without lying*; that a witness can hallucinate *without being insane*; and that a witness can misinterpret what he has seen *without being stupid*. All humans—even the most honest, the most levelheaded, the keenest-eyed, the smartest—have imperfect perception and imperfect memory. A variety of factors bear upon our ability to perceive an event correctly, and later to recall correctly what we have perceived.

Factors Affecting Reliability of Eyewitness Testimony

Researchers into the validity of eyewitness testimony identify the following factors as affecting reliability:

Slippage of memory. Witnesses recall details more accurately immediately after an event than they do after a long period of time has elapsed (Loftus, 1979). This phenomenon is called *slippage of memory*, and its effect is progressive. A memory accurate an hour after an event will be less accurate after a week, less accurate still after a month, and even less accurate after a year.

Period of observation. Witnesses notice more details and recall them more accurately with increased observation time (Buckhout, 1974; Williams et al., 1992). Also noteworthy when considering period of observation is the fact that witnesses almost always overestimate the duration of a recalled event (Loftus, 1979).

Observation conditions. Witnesses are able to make more accurate observations at close range than at long range, and in bright light than in dim light (Buckhout, 1974). In cryptozoological eyewitness accounts, obstructions (like foliage) and weather conditions (like rain or fog) may further impede accurate observation.

Fear and stress. Witnesses are less accurate in recalling details of events during which they experienced fear or high stress (Buckhout, 1974; Dent & Stephenson, 1979; Williams et al. 1992). A witness who is confronted with a large, unknown animal is more likely to be concerned with escaping harm than with making accurate observations of the animal's anatomical features—features critical for making a positive identification later. Peter Byrne (1975), who catalogs scores of Sasquatch sightings in his book *The Search for Bigfoot*, comments:

> The reaction of most people who encounter a Bigfoot seems fairly standard. The usual pattern is one of shock, surprise, often followed by near-panic and rapid flight.

One can well imagine that a witness in a state of "near panic" and in the act of "rapid flight" might have difficulty recalling the finer details of his Bigfoot encounter.

Expectancy. Witnesses tend to see what they expect to see (Buckhout, 1974; Williams et al., 1992). I consider this factor to be hugely significant in evaluating native eyewitness accounts. If the witness has been raised from infancy hearing folk stories about a terrible beast that lurks in the nearby forests, he's apt to make minimal observed data (a loud crash in the brush, a quick blurry glimpse of *something*) fit his expectations. This phenomenon occurs in Western cultures as well—although probably with less frequency, because belief in "monsters" is generally discouraged. Binns (1984) records the following eyewitness account from Loch Ness:

> I saw a heavy wash or wake such as a motor-boat might produce, and I thought: 'Now when I get round that rocky promontory I'll possibly see the Monster.' But when I rounded the bend I saw a couple of swans. On the smooth water the waves appeared all out of proportion to their source.

On any other lake, the witness would probably have immediately thought of a mundane explanation for unusual surface turbulence; but since the incident occurred on notorious Loch Ness, he thought first of the elusive aquatic monster.

Want or need on the part of the witness. Witnesses tend to see what they want to see (Buckhout, 1974). This factor is perhaps more significant for enthusiastic cryptozoologists than for natives. In an article for *Fortean Times*, self-described "armchair cryptozoologist" Ronald Rosenblatt (1996) describes his encounter with the "nearly extinct" rhinoceros iguana (*Cyclurua cornuta*) in the parking lot of the Miami Seaquarium:

> Although I am no expert, [the lizard] looked to me like a giant iguanid. In fact, it looked most like the now nearly extinct Rhinoceros Iguana.

The photograph that accompanies the article does indeed depict an adult *Cyclura* (probably *C. cornuta*). However, *C.*

cornuta is only "nearly extinct" on its native Hispaniola. In the United States, *C. cornuta* is a popular cage pet, and escapees are not uncommon in Miami. I myself have collected two specimens during my two-year stay in the area.

> When I looked into the matter, I discovered that . . . while some large lizards have turned up in southern Florida, they have been monitor lizards, not iguanids like the animal I saw.

Rosenblatt did not exercise due diligence in his research. *The National Audubon Society Field Guide to North American Reptiles and Amphibians* (Behler & King, 1979) lists two large introduced iguanids (the common iguana *Iguana iguana* and the spiny-tailed iguana *Ctenosaura pectinata*) as occurring in Miami. *Iguana iguana* is so abundant that city officials have posted a prominent "Iguana Crossing" sign less than a kilometer from the location of Rosenblatt's sighting (pers. obs.).

> This odd experience changed my attitude toward people who report strange animals. When one has had such an experience, it is no longer possible to accept the derision of the skeptics at face value . . .
>
> What could be more unlikely than seeing a giant lizard in the middle of a huge city? It would be easy to doubt the truth of my experience, yet I know it happened and the photographs back me up. I didn't imagine the lizard and I didn't exaggerate its size.

Seeing a giant lizard in Miami is like seeing a stray cat in any other big metropolitan area. Seeing a *Cyclura cornuta* in Miami is like seeing a stray purebred Siamese cat—unusual, to be sure, but not newsworthy and certainly not inexplicable.

Fabrication of memories. Witnesses sometimes remember events that, quite simply, never happened (Buckhout, 1974; Dent & Stephenson, 1979; Williams et al., 1994). They aren't lying; they just remember incorrectly. This phenomenon, called *confabulation*, is well known and extensively verified experimentally.

Witnesses seem particularly prone to confabulate their presence at "historically significant events" (Buckhout, 1974). In *Cryptozoology A to Z* (1999), Loren Coleman and Jerome Clark record the following account of a huge dinosaur-like animal's attack on a small West African village:

> Pascal Moteka, who lived near Lake Tele, said his people had once constructed a barrier of wooden spikes across a river to keep the giant beasts from interfering with their fishing. When Mokele-mbembe tried to break through the barrier, the assembled villagers managed to kill it with spears. Celebrating their triumph, the people butchered and cooked the carcass, but everyone who ate the dinosaur meat died shortly afterwards.

Moteka does not claim to have witnessed the incident, so this is not a confabulated tale. However, the described event provides fertile material for confabulation. The story is both "historically significant" and highly improbable. Upon hearing a witness claim his presence at such an incident, the interviewer is faced with two immediately intuitive possibilities: that the witness is giving an accurate account of an actual event, or that the witness is lying. Findings on fabricated memories, however, suggest a third possibility: that the witness is telling the truth—in all sincerity, and to the best of his recollection—about an event that never took place. The details of the fabricated memory may be pieced together from folk stories; from vivid childhood dreams; from an actual, dimly remembered conflict between villagers and a hippo or elephant; or even from information accidentally imparted by the interviewer himself.

Completion of fragmentary pictures. Witnesses, over time, may "fill in the gaps" if their observation is incomplete (Buckhout, 1974). "I saw a big black object, apparently moving, in the water" can become "I saw a big black *animal* in the water" in an observer's memory after a while. With the passage of time, the "black animal in the water" may develop eyes, fins, and other features and attributes that the witness didn't claim to see immediately following the event.

Conformity. Witnesses sometimes alter their observations to fit those of other witnesses (Buckhout, 1974; Luus & Wells, 1994). Witnesses feel a greater degree of certainty about their observations if they hear that other witnesses have made similar, substantiating claims (Luus & Wells, 1994). This factor is noteworthy because it undermines the notion that an incident involving multiple witnesses is necessarily more credible than an event involving only one witness. If three witnesses thought they saw Bigfoot, and a fourth is pretty sure that what he saw was just a bear, the loner is likely to lose confidence in his perception and to change it to agree with that of his companions.

Avoidance of saying "I don't know". Witnesses are reluctant to admit ignorance or inability to recall, and will sometimes invent details in order to avoid saying "I don't know" (Buckhout, 1974). This factor is important to consider in devising a

proper interview of a witness. Reports in which the witness is prompted with questions tend to be more detailed but less accurate, because much of the detail is (unconsciously) invented.

Significance of the detail or event. Witnesses usually remember "important" things and forget "trivial" things (Buckhout, 1974; Williams et al., 1992). If an armed robber orders a bank teller to surrender the contents of the cash drawer, the teller's attention may be so fixed upon the gun that he does not at the time notice, nor does he later recall, the color of the bandit's eyes. The detail simply isn't important to the witness in the context of the event (although it may become very important later, in identifying the criminal). Likewise, a witness confronted by a big, unknown, possibly fierce animal is very likely to overlook subtle field marks.

Age. Witnesses may be more or less reliable depending on their age. For various physiological and psychological reasons, the elderly and children are generally less reliable than young and middle-aged adults (Buckhout, 1974; Dent & Stephenson, 1979).

The elderly are subject to various impairments to sensory perception (cataracts, glaucoma, hearing loss, etc.), to memory loss, and to senile dementia, any of which can detract from the accuracy of their observations and recollections (Dent & Stephenson, 1979).

Children are more vulnerable to suggestion than are adults (Dent & Stephenson, 1979; Williams et al., 1992), and are more likely to fill in missing details from imagination (Loftus, 1979). Additionally, children exhibit a near-universal (and possibly innate) fear of the dark, and of "monsters" that might prowl in the dark (Sagan, 1977). In Western cultures, this fear is discouraged as shameful and irrational. In cultures where children wandering unsupervised at night might fall victim to predatory mammals, venomous snakes, and other sorts of natural hazards, the "irrational" fear may be actively encouraged, and reinforced by nightly repetitions of scary folktales.

Sex. Witnesses may be more or less reliable depending on their sex. Older studies show that men are more reliable in all instances; more recent studies show that women are more reliable except when they are afraid or under stress (Dent & Stephenson, 1979). Again, fear is an important factor to consider in many cryptozoological reports.

Physical condition. Witnesses may suffer from physical ailments (near-sightedness, cataracts, colorblindness, etc.) that affect their ability to describe accurately what they have seen (Buckhout, 1974; Dent & Stephenson, 1979). Physical impairments are probably particularly important in native witnesses, many of whom may have undiagnosed problems with their vision, and few of whom have access to first-rate corrective treatment.

Even witnesses who are free from permanent disabilities are vulnerable to temporary physical stresses that can affect their reliability. Long-term lack of food or sleep, for example, can impede a witness's ability to interpret perceived objects or events; in extreme instances, hunger and exhaustion can cause hallucinations (Sagan, 1996).

Roy Mackal (1976) recounts a Nessie sighting by H.L. Cockrell, who had spent three consecutive nights in a kayak trying to photograph the monster:

> Two unsuccessful night hunts led to a third which was also unsuccessful until dawn. At first light, a breeze had dropped and the loch was very calm. Cockrell noticed something to his left about fifty yards away. The object appeared to be swimming very steadily and converging on him. . . Cockrell said it looked like a very large flat head that was wide and four or five feet long. . . He took two pictures, but then a slight squall came up. After it was over, he closed in on the object and found a four foot stick, one inch thick. . .
>
> I am quite content to accept Cockrell's . . . assessment that he photographed a stick or small log and assume that a combination of fatigue from thee nights' activity on Loch Ness and a tremendous psychological bias of belief and expectation produced the recorded experience.

Training. Witnesses with training in fields that require accurate observation often recall descriptive details better than untrained witnesses; witnesses with such training may also be less prone to suggestion (Williams et al., 1992). The reported findings deal with policemen observing humans and their activities. I submit that a similar situation may exist with trained zoologists, experienced hunters, or even avid birdwatchers, observing animals and their activities. Natives who rely on their local animals and plants for sustenance obviously have more relevant training than the average Western suburbanite, and this factor must be considered in any evaluation of native testimony.

Biased interviewing. Witnesses are extremely subject to influence by interviewers (Buckhout, 1974; Dent & Stephenson, 1979; Williams et al., 1992). "Leading" questions, and presentation of photographs for comparison ("Did it look like *this*?"), can warp an observer's recollection. Witnesses are also sensitive to non-verbal cues that indicate the interviewer's satisfaction or dissatisfaction with certain answers, and the witness may unconsciously tailor his story in order to appear competent and helpful to the questioner (Buckhout, 1974).

Factors Affecting Reliability of Native Eyewitness Testimony

In addition to the aforementioned factors that apply to analysis of any eyewitness testimony, I suggest a few others that apply primarily to the testimony of natives:

Language barrier. The description a native gives is only as good as his command of English, your command of his language, or your interpreter's command of both languages. In any translation, errors can occur.

Alternative taxonomies. Native peoples have their own classification schemes for animals and plants. Their methods of categorization are sometimes very different from our own (Durkheim, 1990; Lévi-Strauss, 1966). Ours is based on common descent—which, until the very recent introduction of DNA analysis, has been evaluated primarily by physical similarity. Other cultures' taxonomies are based on the ways in which animals are used (deer and alligators might be grouped together, because they both furnish leather); on the time of day when animals are active (bats and owls might be grouped together, because they are both active at night); or on where the animal lives (parrots and monkeys might be grouped together, because they both dwell in trees). When a native says, "The animal is in the family of the crocodile and the monitor lizard," he may not be indicating the fact that the animal is large and reptilian, but rather some native taxonomic similarity—the fact that, like a crocodile or monitor lizard, it lives near the water; or the fact that, like a crocodile or monitor lizard, it is eaten by the locals. Language barriers can amplify misunderstandings of this sort.

Overconfidence on the part of the witness in his own expertise. I've personally encountered this problem in talking with hunters and outdoorsmen in the United States. I believe it may be common to hunters and outdoorsmen in all cultures—and, of course, it would be more prevalent in cultures where a greater proportion of the population are outdoorsmen. Witnesses with extensive experience in the woods convince themselves that when they encounter an animal they've not seen before, the animal must be something extraordinary and alien—because, after X number of years in the woods, *surely* the witness knows every animal out there. In the mind of the witness, unknown *to him* means unknown *period*. This assumption is likely to be false especially among native people for a number of reasons. (1) In any region, there are bound to be known animals so rare or secretive that even an experienced hunter could go an entire lifetime without seeing them once. (2) Native peoples usually have limited access to electricity, flashlights, batteries, etc., and their nighttime foraging activities are therefore restricted; many nocturnal animals could escape notice for generations. (3) Native peoples frequently have no written language, and have limited access to television, books, the Internet, and other information resources; so they have no way of learning about wildlife except by direct experience or by word of mouth. While a native hunter may have fantastically thorough knowledge of the wildlife within a few days' walk from his village, he may at the same time be largely ignorant of animals found only a hundred miles away. What happens when, due to some unusual circumstance, a lone specimen of some strange-looking animal wanders from its accustomed range? Someone with access to The Discovery Channel would say, "Oh. That's a rhino. I've seen those on TV. What's it doing *here?*" A native hunter might well believe he's seen a monster, and might have great difficulty describing a creature so completely foreign to his experience.

Incomplete separation of science, history, and myth. In our society, science, history, religious allegory, and fictional entertainment are fairly distinct. Individuals who fail to recognize the distinctions are in the minority, and are generally held in scorn. In native cultures, however, the lines between these different sorts of information are blurred—when, indeed, there are lines at all (Lévi-Strauss, 1978). Lack of a written language almost assures distortion of information as it gets passed orally from generation to generation.

Skepticism is encouraged in Western scientific tradition—even the most fundamental principles of science are periodically questioned and subjected to testing (Hawking, 1988). Skepticism is discouraged in native societies, where unquestioning acceptance of inherited tradition and wisdom is a virtue (Lévi-Strauss, 1978). Belief in "monsters," never actually seen but frequently talked about, therefore seems likelier in native cultures than in Western cultures—and, as previously discussed, belief profoundly affects eyewitnesses by creating *expectancy*.

Different attitudes toward sense data. In Western society, we are encouraged through formal education to recognize the fallibility of our senses. Observation is the *beginning* of the process that leads to proof; observation alone does not constitute proof. This mode of thought, however, is unnatural, counterintuitive, and only recently developed. For peoples who rely

heavily on their keen eyesight or acute hearing to secure food and to avoid dangers, *seeing is believing*. Observation *is* proof (Lévi-Strauss, 1978).

The Bottom Line

In evaluating eyewitness testimony from anyone, from any culture, always consider the limitations of human perception and memory. Always consider how your questions may affect the witness's recollection. And always ask yourself: *Which is more likely—that the incident occurred exactly as described? Or that the witness has misinterpreted, or misrepresented, the data?*

Let's close with an illustrative anecdote. A frightened neighbor once called upon me to rescue her from a cryptozoological menace in her back yard. The creature, which she described as a "furry lobster, about two feet long," had been on her patio when she first encountered it. In their mutual fear, both "furry lobster" and neighbor fled the scene. The "furry lobster" took shelter under a shrub in the garden; my neighbor hurried indoors, to telephone first the police (who weren't interested), and then me. I found the mystery animal right away. It was a juvenile spiny-tailed iguana (*Ctenosaura* sp.). The spiny-tailed iguana is not native to South Florida, but introduced specimens have established breeding populations throughout the region and the lizard is by no means uncommon here. I was not surprised to find the animal—but I *was* surprised at the woeful inaccuracy of my neighbor's description. In no way did this lizard resemble a lobster; in no way was it furry; and its total length was about one foot, half the size reported. What further distortions might have been introduced if I'd heard the report a year after the incident? If the report had been imperfectly translated from another language? If I'd shown the witness pictures of animals approximately matching the "furry lobster" description? If I'd asked her to draw for me what she'd seen? And how might my perception of the report have been different if the event had taken place not in suburban Miami, but in uncharted Amazonia?

Sorry to disappoint anyone who's been on the trail of the Florida Furry Lobster. To the rest of you, happy hunting.

Acknowledgements

Chris Orrick posed the question that led to the composition and publication of this article, and generously shared research materials with me. Peter Hynes provided valuable editorial comments on an early draft of the article. Chad Arment moderates the online cryptozoology forum, and also contributed research materials necessary for this article's completion. Matt Bille provided relevant documents that my local libraries could not. Ben Roesch and John Moore edited the later drafts of the article, and prevented many errors of print, omission, and fact from appearing in the final published version. I thank you all.

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Some Chinese Cryptids (Part Two)

by Richard Muirhead

This article is based entirely on the work of Bernard Read, who published translations of Chinese *materia medica* in the *Peking Natural History Bulletin* in the 1930s. These translations were from several sources, but especially the *Pen Ts`ao Kang Mu* of 1597. The entire series of Chinese *materia medica* is a combination of the semi-factual and the fabulous.

The information Read gathered included many stories about felids (see Muirhead 1998). White tigers were referred to as *Han* and black tigers as *Yu*. The *Piao* is a five toed tiger; when it has horns it is known as *Ssu*. The *Ssu* is "shaped like a cat and is the size of a cow." It has "a yellow coat with black spots [and] saw-like teeth and hooked claws." Apparently, it would "roar like thunder" and caused "a wind to rise."

The *Chiu Erh* is "a huge tiger with a non-carnivorous diet but it kills tigers and leopards. It has a white body with black spots and a tail longer than the body." The *Shih Ching* is a leopard which is red with a black tail. Another cat-like animal is the *Po*: "a piebald horse ... a fabulous tiger, body like a horse, white body with a black tail, a single horn, serrated teeth with which it can eat tigers and leopards."

The Chinese sources also describe an animal with a weasel-like body and a cat's head called the *Huang Yao* (Fig. 1). Its back is yellow and its belly is black.

The *materia medica*, specializing in drugs made from animals (Read 1976), describes more strange animals. The *Chiao Tu* is a rabbit-like animal that eats iron. The male is yellow and the female is white. The now extinct Chinese rhinoceros is described as being a triple horned species. There were also supposed to be white, black, or yellow foxes, one of which "by striking its tail on the ground can generate fire."

There are a number of cryptids of note in Read's other compilation, *Insect Drugs, Dragon and Snake Drugs and Fish Drugs* (1977a). "In the eastern provinces there is a viper much like the ordinary viper *Agkistrodon* but shorter with four feet, which can spring up and bite people. Its bite is absolutely fatal" (p. 48). This description is similar to that given to the *tzuchinoko*, an unknown snake from Japan (see Dethier & Dethier-Sakamoto 1987). There was also supposed to be a snake called the *Huan She*, translated as the Coiled Snake. "Coiled in a very large circle of more than ten lengths of ten feet each, living on wild animals, very swift in action travelling along like a cart wheel on mountains ten thousand feet high ... If people eat the fat it is said that swords and rapiers cannot injure them." (p. 55). This "cart wheel" behaviour is reminiscent of the hoop-snake stories of North America (Meurger & Gagnon 1988). The *Tuan Ts'ao Wu* is a species of *Natrix* (a genus of colubrid water snake) only five or six inches long with a small dragon-like head and completely black. Apparently, when cooked in wine it is good for leprosy (p. 56).

Finally, there are some unknown Chinese turtles mentioned in Read (1977b): The Pearl Turtle looks like a

Fig. 1. Speculative illustration of the *Huang Yao*. Illustration by Darren Naish.

lung with eyes and six feet, and is found near Canton. On account of the six legs, Brad La Grange has suggested that this may be an arthropod, possibly a beetle (post to the cz Internet mailing list, February 2, 1999). The Vermilion Turtle is found in the South Seas and is as large as a coin. The underside is blood red in colour.

Acknowledgements

Thanks to Darren Naish for the illustration.

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The Basilisk or Cockatrice

by Richard Muirhead

From classical times to at least the 17th century the Basilisk or Cockatrice held a place in animal mythology. The basic form of the myth remained unchanged from its origins to early modern times. The word basilisk derives from *basiliskos*, which in turn is derived from *basileus*, or king. Some reports claimed that the basilisk had three white excrescences on its head which made it appear to have a cockscomb. (This is rather like the cryptid from Africa known as the crowing crested cobra (Shuker 1991). In fact, the basilisk was said to inhabit Africa, among other places.) Pliny wrote the following about the basilisk in his *Historia Naturalis* (VIII, xxxiii), as translated by Rackham (1956: 57-59):

> "The basilisk serpent also has the same power ["all who see its eyes expire immediately"]. It is a native of the province of Cyrenaica [in northeast Libya], not more than 12 inches long, and adorned with a bright white marking on the head like a sort of diadem. It routs all snakes with its hiss, and does not move its body forward in manifold coils like the other snakes but advancing with its middle raised high. It kills bushes not only by its touch but also by its breath, scorches up grass and bursts rocks. Its effect on other animals is disastrous: it is believed that once one was killed with a spear by a man on horseback and the infection rising through the spear killed not only the rider but also the horse. Yet to a creature so marvellous as this—indeed kings have often wished to see a specimen when safely dead—the venom of weasels is fatal: so fixed is the decree of nature that nothing shall be without its match. They throw the basilisks into weasels' holes, which are easily known by the foulness of the ground, and the weasels kill them by their stench and die themselves at the same time, and nature's battle is accomplished."

According to John Eusebius, a 17th century surgeon, the basilisk's length was three hand's breadths, its body was yellow, and its head was narrow and pointed. The basilisk has also been known as the cockatrice. The word "cockatrice" first denoted "crocodile" but by an obscure transference came to denote "basilisk" in English translations of the Bible. For example, in the 17th century King James Bible Isaiah 11:8 reads:

> "And the suckling child shall play on the hold of the asp, and the weaned child shall put his hand on the cockatrice's den."

Modern versions of the Bible, such as Gideon's Bible, substitute "viper" for cockatrice.

The basilisk was thought to be the most deadly of the animals of creation. It could kill by its breath. According to some reports it could kill just by being looked at. In *Cymbeline*, Shakespeare wrote:

> "It is a basilisk unto mine eye
> Kills me to look on't."

Furthermore if the basilisk saw itself in a mirror it would die. The belief came about that the basilisk arose from an egg laid during the days of the dog star Sirius by a seven-year-old cock. The egg was spherical, not ovoid, and it was hatched by a toad. It had no shell—merely a membrane. The emerged basilisk had the habits of a toad (such as inhabiting deep wells or caverns, from whence emerged poisonous gases) and some physical characteristics of a cock.

Opinion seems to be divided as to whether or not the basilisk looked completely like an ordinary snake with a crown or the body of a cock with a tail like a snake (Fig. 1).

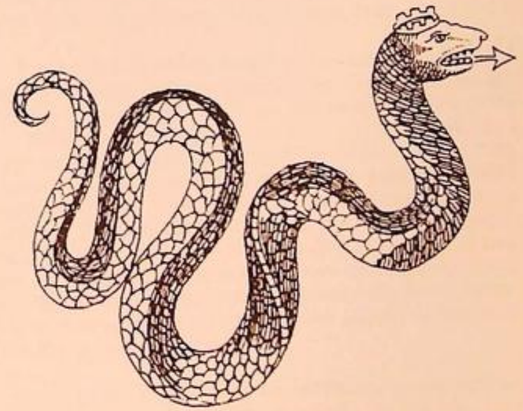

Fig. 1. Basilisk, according to Ashton (1890).

Aldrovandus portrayed the basilisk with eight legs. Pliny said it moved along upright and according to Topsell "hee creepeth not on the earth like other Serpents, but goeth halfe upright, for which occasion all other Serpents avoyde his sight." In a posting on the cz Internet mailing list, M. Wren (July 1999) suggested that the basilisk may have been based on the lizard-like appearance of a chick embryo in early development.

There were fantastic stories told about the basilisk. It could be killed by a weasel. When a basilisk feeds on a dead carcass, all the other serpents hide themselves. When a spear is thrust into a basilisk, the poison is drawn up the spear and the spear thrower is killed. However, one early authority quoted by Ashton (1890) stated:

> "The Cocke also both seene and heard for
> his
> own voice and combe,
> is a terror to the Lion and Basliske, ..."

In 1587, a basilisk was seen in a house in Warsaw. "It was the size of an ordinary fowl ... Its crest was like a crown, partly covered with a bluish colour. Its back was covered with several excrescent spots, and its eyes were those of a toad ..." (Goldsmid 1886: 26).

The basilisk is reminiscent of two cryptids, the tatzelwurm of Switzerland and the crowing crested cobra. It is possible that the basilisk is a fusion of folk memories of these two cryptids, if they did or do exist.

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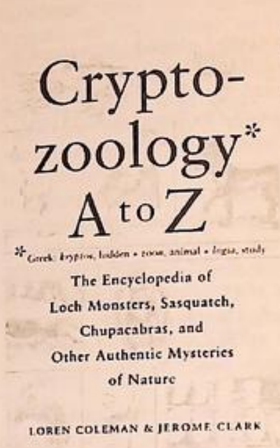
Reviews



Cryptozoology A to Z
by Loren Coleman & Jerome Clark
Simon & Schuster, New York, 1999, 270 pp., softcover, $13.00 (US), ISBN 0-684-85602-6

Reviewed by Ben S. Roesch

Responding to the lack of an encyclopedia of cryptozoology, Loren Coleman, a well-known cryptozoologist, and Jerome Clark, a researcher of strange phenomena, have produced an A to Z handbook of the subject. While not as comprehensive as a full-fledged encyclopedia, *Cryptozoology A-Z* is an excellent introduction and reference to the field.

The authors have crammed quite a bit of material into 270 pages. The first entry is "Abominable Snowman"; the last, "*Zuiyo-maru* Monster" (a rotting basking shark, resembling a plesiosaur, that was trawled up by a Japanese ship in 1976). In between are dozens of other entries, including cryptozoological stars such as the Loch Ness monster and bigfoot, as well as lesser-known cryptids such as the Olgoi-Khorkhoi, a worm-like creature from Mongolia, and the Nahuelito, a lake monster from Argentina. Besides cryptids, there are also entries on general topics such as living fossils and cryptids, as well as cryptozoological evidence such as the Pangboche hand and the Patterson film. Some of the more illustrious new animal species discovered in the last century and a half are also given entries, from the okapi right up to the recent spectacular discoveries of new mammals in southeast Asia. A large chunk of the book is comprised of entries on many different cryptozoologists. Although there is a probably unintentional bias towards North American cryptozoologists, the biographical entries in *Cryptozoology A-Z* make it the most comprehensive source of information on cryptozoologists available.

The entries range in length from one paragraph to several pages. I found the content to be too concise; some entries could have been much longer and coverage was not always comprehensive. I assume this was due to space constraints, but it is too bad that the publishers were not willing to allow a longer, more in-depth book. Still, *Cryptozoology A-Z* provides an excellent introduction to many aspects of cryptozoology. Those who are more knowledgeable about cryptozoology will find much of the content familiar—presumably, the book was written for a more general audience—but the book remains a valuable reference. Also, some obscure or unpublished material is present, including first-hand information from the discoverers of the Indonesian coelacanth population.

Coleman & Clark generally do not come to any conclusions about the different cryptids discussed. Instead they give information about the history and alleged nature of the cryptid, and then leave the matter of judgment to the reader. Nonetheless, they do give some opinions. I was happy to see that ideas of living dinosaurs and pterosaurs were not given much credence. The authors also agreed with my research criticizing the idea that the giant prehistoric shark *Carcharocles* (or *Carcharodon*) *megalodon* is not extinct.

I noticed a few errors in *Cryptozoology A-Z*. In the entry for *megalodon*, the authors wrongly implicate Matt Bille as a proponent of the idea that the shark is still alive (Coleman & Clark have apologized for this). My name is present in a few places in the book—although this is flattering, I cannot help but nitpick some minor errors. It is said that I am "intrigued by rumours of a giant cookie-cutter shark" (p. 208); this is true, but I now believe that such rumours have been fueled by the misidentification of Pacific sleeper shark (*Somniosus pacificus*) bite marks found on a whale carcass. The authors also state that "cryptozoology played a role in identifying the most recent verified megamouth from the Philippines" (p. 156), because I was the first person to identify the shark, from photos. However, since I am a shark researcher, I made that identification in a marine biological capacity, not cryptozoological. Finally, Coleman & Clark cite me as saying that Eugenie Clark gave a lecture tour in Canada in 1996; in fact, these lectures took place in 1992.

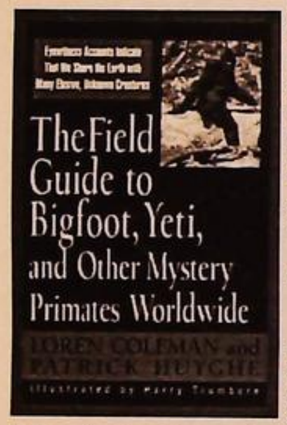
I was not particularly happy to see entries on the nine types of mystery primates proposed by Coleman & Patrick Huyghe in their recent book (see the following review). In the entry on chupacabras—which I do not think is a cryptozoological entity, nor real to begin with—I was disappointed that no note was made of the generally shoddy evidence for the chupacabras. The fact that chupacabras is entirely a Hispanic phenomena, and that there was media-driven hysteria that peaked and then died in a matter of two years, is mentioned, but generally played down. In my mind, this clearly points to culturally transmitted contagion fueled by a mixture of folklore, hyperbole, and attacks on livestock by feral dogs and other wildlife.

An entry on the piasa, an alleged Indian thunderbird of sorts, is included. The authors, however, do not take into account John Moore's important paper on the subject, which I think clearly shows the entire case to be more myth than reality. Finally, a biography of zoologist John MacKinnon is

present, as if to say he is a cryptozoologist. I do not think MacKinnon has ever thought of himself as a cryptozoologist, and he might not like to be called one either. What I found strange is that MacKinnon has still been included, yet so many of the scientists involved with the International Society of Cryptozoology were not given biographical entries.

Regardless of my criticisms, *Cryptozoology A-Z* is well-illustrated, with many photographs and drawings. A timeline of important animal discoveries and cryptozoological milestones is found at the beginning of the book. Coleman & Clark also present a short introduction that provides background on cryptozoology. At the end of the book, an appendix includes details on cryptozoology museums and exhibitions, as well as cryptozoological periodicals and web sites. There is also a good list of cryptozoological books for further reading. No index is present, but this is understandable as the book is already arranged in an easily navigable fashion.

Although various corrections and the inclusion of more content would have made *Cryptozoology A-Z* better, it remains an excellent introduction to the subject. It is a useful reference and is a must-have for anyone interested in cryptozoology.



The Field Guide to Bigfoot, Yeti, and Other Mystery Primates Worldwide
by Loren Coleman & Patrick Huyghe
Avon Books, New York, 1999, 207 pp., softcover, $12.50 (US), ISBN 0-380-80263-5

Reviewed by Ben S. Roesch

In this book, authors Loren Coleman and Patrick Huyghe present a rather provocative and radical theory: there are nine distinct "classes" of mystery primates existing worldwide. The book begins with an introduction that describes some background information as to how the authors came to this startling conclusion. It also includes descriptions of the natural history and appearance of their nine different types: neo-giant, true giant, marked hominid, neandertaloid, erectus hominid, proto-pygmy, unknown pongid, giant monkey, and merbeing. The core of the book is comprised of one-page summaries about different mystery primates from around the world, with an illustration of the creature on the facing page. The summaries usually concentrate on one eyewitness report. The authors group the sightings into chapters based on geographical locality: North America, Latin America, Europe, Africa, Asia, and Oceania. An afterword is included which discusses various topics, including how the animals could remain undiscovered today, evidence, hoaxes, the effect of culture on sightings, and the authors' opinions on which mystery primates are most likely to be found.

Though their book is interesting, I am not convinced by Coleman & Huyghe's classification system, which resembles Bernard Heuvelmans' nine-part sea serpent scheme presented in *In the Wake of the Sea Serpents* (1968). I find that, like Heuvelmans' outline, Coleman & Huyghe's classification scheme is constructed on evidence of insufficient quality to support such a radical hypothesis. Much of the evidence presented as support for the existence of the nine types of mystery primates is anecdotal. Unfortunately, anecdotal evidence is not scientifically valid; it is often vague and can be interpreted in many ways. (Some of the reports Coleman & Huyghe include are more compelling than others, such as a 1987 sighting of a "proto-pygmy" by a mycologist in Guyana.)

In defense of the authors, I think that instead of attempting to provide scientific, biological classifications—which I certainly feel would be unwarranted—the authors seem simply to want to outline some different groups of mystery primates in general, descriptive, non-scientific terms. Still, I find it debatable whether reliable classifications of unknown animals, even if not scientific, can be based on anecdotal evidence. I don't think we can reliably split mystery primate reports into nine distinct types; most of the different types could be lumped together, as the eyewitness reports are typically very similar. For example, marked hominids are said to differ from neo-giants (such as the sasquatch) in that they have a piebald colouring and are "more human-looking and somewhat shorter" (p. 20). To me, these supposedly diagnostic characteristics are too vague and open to misinterpretation. The concept of "human-like" may vary from person-to-person, and how can we be sure that eyewitnesses are accurately recording height? As for the piebald colouring, this could be caused by effects of sunlight and shade, or colour variation within a single hypothetical species, such as the neo-giant. This latter point is also applicable to the shortness of marked hominids—how do we know witnesses aren't seeing short individuals (perhaps females or juveniles) of neo-giants? Arguments like these are relevant for most of the nine "classes" proposed by Coleman & Huyghe. I think there is a possibility that an unknown giant primate may exist on Earth—perhaps even two—but, given the evidence at hand, I have a very hard time accepting that there are nine species.

Two of the nine especially stand out in my mind as too bizarre to accept. The first is the "merbeing", including the chupacabras, traditional merfolk, and even Steller's "sea-ape". I feel that the chupacabras has no place in cryptozoology (see previous review), and, for what it's

worth, I have never heard of it described as an aquatic creature. I totally disagree that Steller's "sea-ape" is indicative of a species of ocean-going primate. Steller's description does not sound like a primate at all. I think other explanations for Steller's "sea-ape", such as the Hawaiian monk seal hypothesis, make a lot more sense. Reports of traditional merfolk are rare and probably represent misidentifications of known animals. As for the general concept of "merbeings", which Coleman & Huyghe propose are primates adapted to life in water, I note that there are no aquatic primates, and there is no good evidence that there ever have been.

The second group I find highly problematic is the "true giants", which are supposed to be 20 ft high and skinny. I find this morphology inconceivable for a bipedal mammal, due to resultant problems with the circulatory system and back and bone stress. Also, it seems very unlikely to me that 20 ft tall unknown primates could remain unknown, especially considering its proposed worldwide range, including much of North America.

One aspect of Coleman & Huyghe's work I feel could cause confusion is their use of the term "classes" in describing the different types of unknown giant primates. In biological taxonomy, classes include such designations as mammals, cephalopods, birds, and cartilaginous fish. Although Coleman & Huyghe's classification scheme probably was not meant to be scientific (that is, not meant to conform precisely with accepted biological taxonomy), perhaps a different word than "class" should have been used, or at least a disclaimer could have been included saying that they were not suggesting each type of mystery primate constitutes a new biological class.

The book purports to be a field guide, but I find the illustrations provided to be undiagnostic—they are too cartoonish to be acceptable for field identification, and many of the illustrations look remarkably similar. As might be expected in a field guide, details about food, daily habits, distribution, and other aspects of natural history are provided for each of the nine types, but the accuracy of such information should be questioned because it is based largely on eyewitness testimony.

I have been highly critical of Coleman & Huyghe's book so far. The book does have merits. There are good references for each sighting, and a decent bibliography (unfortunately, there is no index). I am happy that the authors reject paranormal claims about mystery primates (despite this, the book is invariably placed in the paranormal/"new age" section of every bookstore where I have seen it). The book is generally well-written and easy to read. Overall, Coleman & Huyghe's volume does provide an interesting survey of many mystery primate sightings and legends from around the world—I just don't agree with their classification scheme and some of their conclusions.

Fortean Studies vol. 5
by Steve Moore (ed.)
John Brown Publishing, London, 1998, 320 pp., softcover, £19.99, ISBN 1-902212-14-2

Reviewed by Ben S. Roesch

The annual *Fortean Studies* series, edited by Steve Moore, is well-known for its consistently high standards of research and content. The fifth volume in the series maintains this reputation.

Volume 5 contains ten papers, averaging around 20 pages in length. Five of the papers are cryptozoological, and five deal with other fortean topics. The non-cryptozoological papers cover topics including the reputation of scientists (by Colin Bennett), mystery out-of-place ships (by Ulrich Magin), the progress of ufology as a discipline (by Neil Nixon), the history of myths about the path to the afterlife in Indo-European religion (by Alby Stone), and plagiarism in the occult literature (by Mark McCann & Gareth Medway). Although these papers are interesting (I particularly liked the paper on ufology; I find that it has some relevance to the state of cryptozoology today), I shall concentrate this review on those that deal with cryptozoology.

In "The Big Grey Man of Ben Macdhui", Andy Roberts gives a good overview of the legends and stories surrounding this Scottish mystery, which is encountered on Ben Macdhui, one of the highest mountains in the United Kingdom. The "Big Grey Man" is rarely seen and more often heard or "felt". Those who have supposedly encountered it often say that they heard footsteps following them, and then panic overtakes the person and they run. Roberts' analysis of the very few and remarkably similar encounters with the "Big Grey Man" is interesting. He concludes that the phenomenon does not indicate a cryptid, but is the result of the foggy, eerie, and forbidding environment of Ben Macdhui, which can play tricks on the human mind. Roberts thinks that the legend of the "Big Grey Man" is better seen as a "mountain panic" (he gives many examples from various mountaineers of this psychological phenomena) that has been mixed with folklore.

The next cryptozoological paper is by folklorist Michel Meurger, and is entitled "The Smoking Apeman". The title refers to the abduction of lumberjack Albert Ostman by a group of sasquatch. Ostman escaped by giving his snuff to one of the sasquatch, who proceeded to eat it, and became ill. When the other sasquatch were attending to the sick individual, Ostman ran off. Meurger is skeptical of the story, and compares it to some other legends from around the world of abductions by apemen and of the relation between apemen and tobacco. Meurger also makes some important criticisms of the traditional cryptozoological method, emphasizing the importance of incorporating a cultural stance on cryptozoology, rather than interpreting all folkloric beasts in a zoological or palaeontological light.

The longest of the cryptozoological contributions is "Shug Monkeys and Werewolves: the Search for the Dog-Headed Men" by Jonathan Downes and Richard Freeman. In it, they discuss a large number of cryptozoological and fortean cases, including the dog-headed men of ancient Persia, the Skunk Ape from Florida, bigfoot reports with dog-like faces, the Nandi Bear, and werewolves of London. Downes and Freeman's paper is fascinating, and their conclusions intriguing. They suggest that many of the cases that they discuss represent "zooform" phenomena—"animals" that are not flesh-and-blood but rather psychological manifestations. They contend that "the archetype of the dog-headed man is one that is found in every culture and described by every creed" (p. 201), and conclude that "man's best friend is an even closer part of our collective psyche than we had previously imagined" (p. 201).

Getting back to traditional cryptozoology, Gary Mangiacopra, Michel Raynal, Dwight Smith, and David Avery present a useful review of some of the evidence for the existence of giant snakes in South America. Included is the famous Fawcett report of a 62 ft (19 m) anaconda, as well as numerous lesser known cases. The bulk of the paper is a reproduction of a 1911 account by explorer Algot Lange of a 58 ft (18 m) boa constrictor killed in the Amazon. The frustrating part of all these tales of huge snakes that have allegedly been killed is that no trace of them is ever saved or sent to a scientist. To some, this may seem suspicious. Although the authors do note the somewhat suspicious similarity between Lange's report and that of Fawcett's, they make no distinct conclusions. They leave the question open, wondering if giant snakes still exist or if, due to hunting and habitat destruction, the snakes never have a chance to grow as large as they once did.

Finally, there is "A Supplement to Dr. Bernard Heuvelmans' Checklist of Cryptozoological Animals" by Karl Shuker. The paper is structured much like Heuvelmans well-known 1986 checklist, published in *Cryptozoology*. The different cryptids are separated into marine, freshwater, and terrestrial forms, and further sub-divided into geographical regions. Each cryptid receives about a one-paragraph discussion, and references are provided. An excellent bibliography is present.

Because it is a supplement to Heuvelmans checklist, the paper lists cryptids that were not originally discussed by Heuvelmans. However, in an addendum, Shuker suggests some amendments and alternative identities to Heuvelmans' original work. However, since this is Shuker's paper, all of his suggestions are is own, and not necessarily agreed upon. For example, he feels that the "long-necked sea-serpent" is more likely to be a plesiosaur than Heuvelmans' long-necked seal; I, for one, completely disagree.

I am also skeptical of some of the proposed cryptids. In fairness, Shuker says in his introduction that in the absence of physical evidence it is not known if the cryptids listed actually exist. He also says he has not included reports that he thought were dubious. However, in my mind Shuker has not been careful enough; for example, he lists the possible modern-day survival of *Carcharocles* (or *Carcharodon*) *megalodon*, a claim that has little supporting evidence. Also, Shuker gives some credence to reports of living pterosaurs from North America, an idea I find hard-to-believe in light of zoological and palaeontological evidence. Generally, however, the cryptids listed are not this spectacular and are zoologically feasible. These more believable cryptids are mainly birds and mammals that would probably fit into established families and possibly even genera, and do not require the resurrection of prehistoric beasts. Despite these shortcomings, Shuker's checklist is a useful and interesting contribution to the cryptozoological literature. (There is one update I would like to make: the "mysterious marine arthropod" photographed in 1989 at a depth of about 13 000 ft (4000 m) is not an arachnid, but is in fact an isopod (Hjalmar Thiel, pers. comm., December 28, 1998).)

A discussion of any *Fortean Studies* volume would be incomplete without mentioning the extremely useful index provided for the issues of *Fortean Times* that appeared in the previous year (in this case, the index is for 1997). This excellent and popular British magazine covers all manner of strange phenomena, and each issue bristles with information. The task of indexing a year's worth of *Fortean Times* is unsurprisingly daunting, yet Steve Moore succeeds admirably. He presents a multi-part index, with listings arranged by topics, contributors, articles, book reviews (by title and author), places by town and by country/state, people mentioned, names of fictional characters, names of organizations, names of animals and plants (including cryptids), and date. For a collector of *Fortean Times* or a researcher, this index is invaluable.

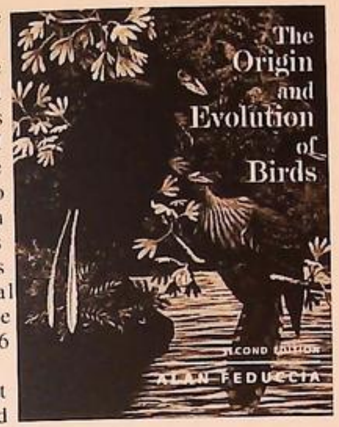
Fortean Studies volume 5 is scholarly, level-headed, and well-edited and produced. Although readable by anyone, it may be of more interest to researchers than the general public. For cryptozoologists, the book is a worthwhile purchase, featuring several interesting and important contributions.

The Origin and Evolution of Birds (2nd ed.)
by Alan Feduccia
Yale University Press, New Haven, Connecticut, 1999, 466 pp., softcover, $29.95 (US), ISBN 0-300-07861-7

Reviewed by Ben S. Roesch

Alan Feduccia is well known in palaeontological circles as one of a small group of palaeontologists and ornithologists who disagree with the popular view that birds evolved from theropod dinosaurs, and also disagree that bird flight evolved from the ground up. Instead, they propose that birds evolved from a different reptilian ancestor that appeared much earlier

than the first bird-like dinosaurs, and that flight evolved from the tree down. While I do not agree with Feduccia's theories of bird origins, I still think his views are well worth reading so that one can get both sides of the story. In this second edition, there is also an additional chapter updating the book from the 1996 original, including discussion of the recent discoveries of feathered dinosaurs and early birds.



Even if you do not agree with Feduccia's non-dinosaurian bird origin theories, you will find his book to be a valuable source of information on prehistoric birds. He presents a comprehensive history of birds, discussing the origins, evolution, and biology of all the major extant groups, as well as various extinct groups. Among my favourite extinct birds are the enormous, carnivorous flightless phorusrhacids. Feduccia also discusses such interesting topics as the evolution in birds of filter-feeding, flightlessness, and aquatic lifestyles. Of cryptozoological interest are the sections on moa, teratorns (sometimes implicated in "thunderbird" sightings), shoebill and marabou storks (possibly responsible for some "living pterosaur" sightings in Africa), and the large, extinct flightless bird *Sylviornis* (Feduccia briefly mentions its role in the oral tradition of the people of New Caledonia, where it lived).

The text, which is fairly well-written, is supplemented by a profuse number of illustrations—including maps, photos, line drawings, paintings, and diagrams—that adorn every page. An excellent references section is provided, as well as a good index.

Parrots: A Guide to Parrots of the World
by Tony Juniper & Mike Parr
Yale University Press, New Haven, Connecticut, 1998, 584 pp., hardcover, $55.00 (US), ISBN 0-300-07453-0

Reviewed by Ben S. Roesch

This dense tome provides a comprehensive guide to all parrot species. Data on most identifiable subspecies are also included. Beautiful colour plates and diagnostic traits of each species are provided, making the book a valuable field guide. However, *Parrots* differs from many field guides in that the species descriptions feature a great deal of biological data, including ecology, distribution, vocalizations, and life history. An introduction to parrot evolution, systematics, and natural history is found at the beginning of the book.

Due to illegal trade and habitat destruction, many parrots are endangered, and the book also includes excellent conservation data. Distribution maps are present for each species. An extensive bibliography is provided. The index is good, but there is no listing by genera (just by vernacular and specific names), which I found unusual.

Parrots is an excellent reference and field guide to the diversity of parrot species; anyone interested in ornithology should purchase this volume.

The Great New England Sea Serpent
by J. P. O'Neill
Down East Books, Camden, Maine, 1999, 256 pp., softcover, $15.95 (US), ISBN 0-89272-461-7

Reviewed by Ben S. Roesch

Sightings of sea-serpents have long been reported from the Gulf of Maine, off the coast of New England. A considerable wealth of information exists on the topic, which June O'Neill has set out to tackle. She has produced a readable, entertaining and informative book.

The body of the book is comprised of eight chapters, each dealing with sea-serpent reports from different time periods and arranged in chronological order, from 1638 to 1997. The majority of the reports in the book are from New England, though some from other areas, such as the famous *Deadalus* and *Valhalla* sightings, are also discussed.

Though O'Neill's coverage of New England sea-serpent sightings is not entirely comprehensive (there are a few reports found in Heuvelmans' classic *In the Wake of the Sea-Serpent* that she does not include), it is still excellent and a number of reports never before discussed in the literature are included. O'Neill leaves testimonials and newspaper reports relatively intact, to avoid bias and to tell the story as accurately as possible. Rather than passing judgment on each sighting, O'Neill presents each sighting as is and lets readers formulate their own conclusions.

Interestingly, no sightings are listed between 1962 and 1997, which leads O'Neill to speculate about the possible extinction of the New England sea-serpent in recent years, if it ever existed. Such speculations are entertained in an

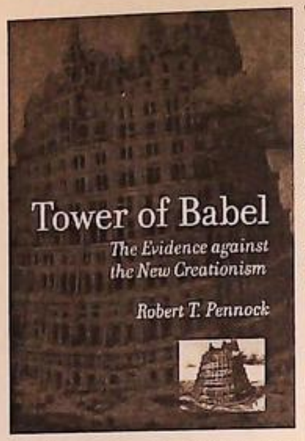
interesting final chapter, in which the author also examines various popular sea-serpent identities, including plesiosaurs and zeuglodons. She does not make a conclusion about the identity of alleged sea-serpents, instead presenting the history and arguments of each identity for the reader's own judgment. It is clear, however, that O'Neill believes that there is something to the many sightings of unusual creatures reported off New England over the last 300 years.

In the final chapter, O'Neill also speculates about the natural history of the New England sea-serpent. Although she is careful to state that her musings are purely conjectural, she occasionally becomes too explicit for my liking, such as when she suggests that sightings of alleged sea-serpents in the company of pilot whales or dolphins "could indicate a symbiotic relationship of some kind" (p. 232). Such conjecture is relatively harmless, however, and fun to read.

I am impressed with the quality of research of O'Neill's book. In the introduction, she complains about the poor research and lackadaisical approach of some previous sea-serpent researchers, and says that she has endeavored to do much better. I think she has. The sea-serpent reports and the history behind the phenomena are presented accurately, in O'Neill's enjoyable prose. She has also done her homework in regards to the science and natural history found in her book. Most admirably, O'Neill had her manuscript read by palaeontologists Mike Everhart and Glen Kuban, to ensure the accuracy of her discussions of plesiosaurs, zeuglodons, mosasaurs and other extinct sea-serpent candidates. Kuban, in particular, gave insight on the *Zuiyo-maru* carcass, a basking shark carcass that is still suggested by some to be a plesiosaur. Few cryptozoologists have professionals read their manuscripts; if they did, I think many cryptozoological publications would become more accurate.

My only major complaint about the book is the lack of an index, but I have been told this was due to financial constraints. Instead, O'Neill has provided many nice illustrations, old and new, including photographs and original drawings. Also, an index of sorts is provided: the first appendix is a useful chronological listing of all the sightings in the book, and the page number where each sighting was discussed is given. The second appendix reproduces the questions that the Linnean Society gave to sea-serpent eyewitnesses during a rash of sightings in the 19th century. The book also includes a decent bibliography and notes are provided at the end of each chapter. There is no formal referencing system in the book, but most sources are included in the bibliography or could be found with the details provided in the text. Addresses for relevant web sites and publications are found at the end of the book.

The Great New England Sea Serpent is a great book, and a good example of how cryptozoological research should be done. Anyone interested in cryptozoology should have it on their bookshelves.



Tower of Babel: the Evidence Against the New Creationism
by Robert T. Pennock
MIT Press, Cambridge, Massachusetts, 1999, 429 pp., hardcover, $35.00 (US), ISBN 0-262-16180-X

Reviewed by Ben S. Roesch

It is amazing that, even today, creationist claims—which range in their extremity but are based upon a general denial of Darwinian evolution—continue to be made, despite continuing confirmations of the theory of evolution, and sound refutations of creationist rhetoric. Creationism is alive and as virulent as ever, as shown by the recent Kansas school board decision to omit any mention of evolution from standard state educational tests and the high school teaching curriculum. Pennock's book, which is decidedly pro-evolution and systematically analyzes and falsifies creationist claims, is timely indeed.

One of the strengths of *Tower of Babel* is that it provides sound refutations of not only traditional "creation science" but of "new creationism". The latter, which espouses arguments of "intelligent design" and attacks the naturalistic underpinnings of science, is much more complex and sophisticated than the old "creation science". The new creationists feel compelled to discredit evolution because they feel it conflicts with their ideas of morality and denies that there is a purpose in life. Suddenly, the creation-evolution debate is very philosophical and harder to debate than old claims, such as "the Earth is 6000 years old because the Bible says so." Unfortunately for creationists, Pennock reliably and accurately shows that creationism is still very wrong.

He first discusses the creationists' epistemological attacks against evolution, and the evidence for evolution. It is not hard for a rational person to realize which side has the weightier support. Pennock then diverts from standard biological evolution to discuss linguistic evolution, which has a theoretical base that is similar in content and form to that of biological evolution. Like biological evolution, linguistic evolution is at odds with a literal interpretation of the Bible because it says that God created every language on Earth at one time as a punishment for the Tower of Babel. Pennock's discussion of linguistic evolution in regards to creationist claims is the first I have seen and is interesting.

The rest of the book deals with philosophical arguments in the creation-science debates. Much of this concerns the work of Philip Johnston, a Berkeley law professor, and one of the more articulate creationists. Pennock is a professor of philosophy and thus well able to argue Johnston's points. He defends the naturalistic approach to science and expounds upon the relationships between science, religion and morality. The final chapter discusses why creationism should not be taught in school, and ends with an argument to keep private religious belief separate from public scientific knowledge. Extensive references, as well as an excellent bibliography and index are provided.

Pennock's book is important for cryptozoologists because cryptozoology is sometimes used as evidence for creationist claims. Some creationists believe (wrongly) that stories of living dinosaurs and pterosaurs, for example, validate creationism and prove evolution is wrong. They may, therefore, be less critical of such hypotheses, which, incidentally, are not well supported.

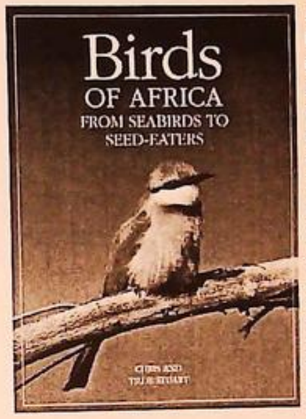
It is important for cryptozoologists to understand what creationism is about, and why, to be blunt, it is wrong. Some cryptozoologists—even those who are evolutionists—are too accommodating with creationism, and are not willing to dispute it. They also do not seem to mind that some aspects of cryptozoology are being falsely used as creationist evidence. At the same time, these evolutionist cryptozoologists are trying to gain respect for cryptozoology from mainstream scientists. I find this ironic. Evolutionary theory is the backbone of biology. If cryptozoology wants to attempt to be scientific or at least be respected by science, it cannot be associated with a pseudoscience like creationism. Pennock's book will equip the cryptozoologist with the knowledge he or she needs to correctly deal with creationist claims relating to cryptozoology, including those from creationist cryptozoologists and from non-cryptozoologists who think that cryptozoology supports creationism.

Birds of Africa: From Seabirds to Seed-Eaters
by Chris Stuart & Tilde Stuart
MIT Press, Cambridge, Massachusetts, 2000, 184 pp., hardcover, $29.95 (US), ISBN 0-262-19430-9

Reviewed by Ben S. Roesch

There are a great number of bird species in Africa; a species-by-species account would take hundreds of pages. Although such volumes do exist, they are often very expensive. In this book, husband-and-wife naturalists Chris & Tilde Stuart have presented a beautifully illustrated introduction to Africa's bird diversity which is both affordable and informative. The book is neither a field guide nor an academic tome. The authors have divided the book into several chapters, each one on a group of birds that share general characteristics—penguins and terns are in a chapter on "Birds of the Oceans", and hawks and owls are in a chapter called "Raptors of the Day and Night." One chapter title I particularly liked is "LBJs", or "little brown jobs", a nickname used by birders for "those generally small, nondescript and difficult to identify birds that may send a shiver down the spine of even the hardened birdwatcher" (p. 121).

Within each chapter, the birds are subdivided into families, which adds a nice systematic touch to the book. The text includes details on natural history and biology as well as entertaining anecdotes. I would like to have seen more biological detail and discussion of more species, but as previously mentioned, the book is intended as an introduction to the birds of Africa, not as an in-depth treatment. Because of this, the text is not referenced, and a list of suggested reading is provided rather than a bibliography. The lack of references may have been necessary to include the excellent systematic listing of every African bird species at the end of the book. A good index is also provided. Although the text is useful, perhaps the best part of the book is the spectacular colour photographs that adorn every page. The Stuarts are renowned wildlife photographers, and their talent shines through. In what it sets out to accomplish, *Birds of Africa* succeeds admirably.



Biology of Marine Mammals
by John E. Reynolds and Sentiel A. Rommel (eds.)
Smithsonian Institution Press, Washington, D.C., 1999, 600 pp., hardcover, $75.00 (US), ISBN 1-560-98375-2

Reviewed by Ben S. Roesch

The title of Reynolds and Rommel's edited volume may be unimaginative, but it precisely describes what you will find inside—600 pages of up-to-date information on marine mammal biology. Polar bears, sea otters, sirenians, pinnipeds, and cetaceans are all covered in the book, but the emphasis is upon pinnipeds and, especially, cetaceans.

Each chapter is written by different specialists, and they cover all the topics one would expect in a scholarly volume of this sort: systematics, functional morphology, physiology, sensory systems, energetics, reproduction, communication and cognition, behaviour, distribution, population and feeding ecology, and environmental concerns. I was disappointed, however, that there were no chapters on evolutionary biology or palaeontology of marine mammals, interesting subjects upon which much has been published

recently.

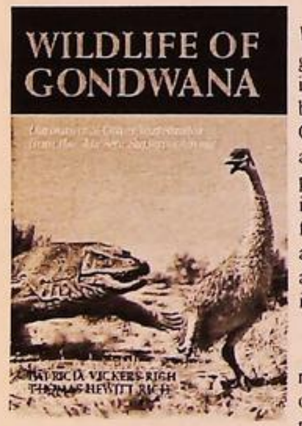
What has been included is excellent, though. *Biology of Marine Mammals* provides the most up to date review of marine mammal biology available and serves as a valuable reference. The book is written for students and professionals, so the average layperson may have difficulty in parts. The chapters on physiology, reproduction and other aspects of straight-up biology may prove the most intimidating. However, there are chapters that are of more general interest, such as Peter Tyack's survey of communication and cognition (discussing, for example, the intelligence of cetaceans), and Randall Wells et al.'s review of marine mammal behaviour. Even the more jargon-rich chapters contain much information that is wonderfully interesting to all, such as the adaptations marine mammals possess to deal with physiological problems associated with diving to depth.

Each chapter is accompanied by an extensive list of references. An excellent index is present. There are many illustrations; though most are graphs and diagrams, there a number of good black and white photographs and line drawings.

The average layperson may find Reynolds and Rommel's *Biology of Marine Mammals* to be too technical for their liking, but will still find some of the material interesting. On the other hand, if you have an interest in marine mammals that goes beyond natural history, the book is a must-have.

Wildlife of Gondwana: Dinosaurs and other Vertebrates from the Ancient Supercontinent
by Patricia Vickers-Rich and Tom Hewitt Rich
Indiana University Press, Bloomington, Indiana, 1999,
276 pp., hardcover, $59.95 (US), ISBN 0253336430

Reviewed by Ben S. Roesch



A quick glance at *Wildlife of Gondwana* may give the impression that it is simply another big, beautiful coffee-table book. Granted, the book is big, and beautiful, but upon picking it up and opening its cover, the reader will find there is an enormous amount of fascinating text accompanying all the illustrations.

Wildlife of Gondwana is a revised and updated version of an earlier edition published in Australia in 1993. It is a comprehensive reference to the fossil vertebrates of the ancient supercontinent Gondwana, and the continents it later split into: South America, southern Africa, India, Australia, and Antarctica. The authors, Pat Vickers-Rich and Tom Rich, are well-known Australian palaeontologists, and thus much of the book concentrates on material from Australia. The book is broken into four parts, each with dense, but readable, text supplemented by many illustrations. The first part provides a background for the book, discussing the geological history of Gondwana, the origins and evolution of life, and various other interesting topics. Part two highlights the science of palaeontology and its practitioners, including the history of palaeontology in Australia, methods palaeontologists use to uncover bones and find out about ancient worlds, and how fossils form and what they can tell us. These first two parts are of general interest and provide good discussions of important topics such as the origin of life, extinction, radiometric dating, and continental drift.

The meat of the book comprises part three, which is a magnificent chronological tour of the vertebrate history of Gondwana and, more specifically, Australia. Vickers-Rich and Rich start in the Ordovician, when the first vertebrates appeared in Gondwana, and move through the age of fishes, the conquering of the land, dinosaurs, the rise of mammals, and finish with extant Australian vertebrates. Part four compares the fossil record of Gondwana in each geological period to that from other geographical locations. An afterword brings the reader up to date on new discoveries. A glossary, bibliography, and index—all excellent—are provided. A useful "Systematic, Geographic and Geological Index" of all fossil families and genera from Australasia is also present.

All in all, reading through *Wildlife of Gondwana* gives one a virtual tour of the history of life on Earth, with emphasis on Gondwana vertebrates. It is at once exhilarating and belittling to realize that our history on Earth is so insignificant compared to the millions of years of life, death and evolution that preceded us.

Though the text is well-written, the book's illustrations, including 450 photographs, and many paintings, graphs, and maps, fill most of the pages. This is not a bad thing! Most of the book's illustrations are gorgeous colour photographs of original and reconstructed fossils, taken by Francesco Coffa and Steven Morton. The original fossils are often well-preserved and astounding in their detail. Photographs of various modern day fossil localities, habitats, and species are also present, as well as maps and graphs. Several dramatic colour paintings and black and white drawings by Peter Trusler round out the impressive illustrations of *Wildlife of Gondwana*. Detailed captions supplement each illustration, including information such as where the fossil was found, what it is, how old it is, its size, and other interesting tidbits. I found it fascinating to simply browse through the book, examining the photographs and reading the

captions.

There are several parts of the book that have some cryptozoological relevance. Several photos of the impressive jaws of *Thylacoleo*, a large, extinct, predatory marsupial that has been implicated in modern day sightings of the "Queensland tiger", are present. Data on *Thylacoleo* are also included. The Tasmanian tiger or thylacine (*Thylacinus cynocephalus*) features similar coverage; especially notable are a full-page photo of a thylacine and a smaller one of an immature thylacine pup. Giant ground sloths are discussed, including a photograph of mummified skin with long red hair from South America. Discussion of other Pleistocene megafauna, such as the wallaby-like *Diprotodon* and the giant monitor *Megalania*, will be interesting to cryptozoologists, since some have suggested that these animals may still exist. Vickers-Rich and Rich even mention that there is "tantalizing evidence that some of the megafaunal elements such as *Diprotodon* survived until as recently as 6000 years ago." Unfortunately, no details are given.

Wildlife of Gondwana is a beautiful and informative survey of the fossil record and evolutionary and geological history of Gondwana and the continents it spawned. It is an essential purchase for anyone interested in palaeontology, and has much to offer for cryptozoologists.

Most of the above books may be purchased on-line, often at a substantial discount, at www.ncf.ca/~bz050/czbooks.html, through a partnership with Amazon.com.

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Contributors for this Issue

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